

REVISION OF SOUTH AFRICAN SPECIES OF RHYNCHOSIA.

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INTRODUCTION.

AT the request of Dr. I. B. Pole-Evans, C.M.G., and Dr. E. P. Phillips, I have examined the collection of the genus *Rhynchosia* from the National Herbarium at Pretoria, and I have also had an opportunity of seeing the plants of this genus from the Herbaria at Capetown and Durban, thanks to the courtesy of the Curators of these collections. I am also much indebted to the Director of the Botanical Museum at Upsala for allowing me to have the loan of Thunberg's types, and to Dr. Schinz for kindly sending me portions of types of many of his species.

Since the publication of the *Leguminosae* by Harvey in the "Flora Capensis," in 1861-62, a considerable amount of additional information has been acquired, and I am glad to take the opportunity offered to me of placing this on record. It is, perhaps, unnecessary to discuss in detail publications anterior to the "Flora Capensis." De Candolle, in the second volume of his "Prodromus," in 1825, described several species of *Rhynchosia* from South Africa, among these being *R. angustifolia* founded on *Glycine angustifolia* Jacq. and *R. rigidula* founded on Burchell No. 2587. The first of these is synonymous with, and must take precedence of, *R. uniflora*, Harvey, the second is evidently closely allied to *R. Totta*, D.C., but there is a mistake in the Burchell number, and I am unable to find it in the Kew Herbarium. Perhaps the other most important publications anterior to the "Flora" are E. Meyer's "Commentorium de Plantis Africae australioris" and Ecklon and Zeyher's "Enumeration." Subsequent to the "Flora" a good many species have been described, and a few preliminary notes on some of these novelties may not be out of place. In the "Journal of Botany," Vol. XVI, 131 (1878), Mr. Spencer Moore described *R. clivorum* from near Pilgrims Rest. It has been subsequently found in Gazaland by C. F. M. Swynerton. It is a curious species with erect stem, showy flowers, and with the upper calycine lobes shorter than the lowest.

In 1888 Dr. Schinz described, in "Verhand. Bot. Brand.," Vol. XXX, two species, *R. hirsuta*, from Olukonda in Amboland, and *R. longiflora* from Great Namaqualand, the latter being allied to *R. Totta*, D.C., but with much finer flowers, and in 1894 the same author described in "Bull. Herb. Boiss.," Vol. II, *R. Woodii*, from Natal, an ally of *R. Orthodanum*, Benth. Dr. Harms in 1899, in Engler's "Bot. Jahrb.," Vol. XXVI, described *R. komatiensis* from between Spitzkop and the Komati River, and *R. longipes*, founded on Wilms No. 395, from Lydenberg. I have compared the latter with the type of *R. crassifolia*, Benth., and do not consider it specifically distinct. In 1897, in the "Journal of Botany," Dr. Schlechter described the very distinct *R. monophylla*, and in the same journal, in the same year, Messrs. Wood and Evans described the equally distinct *R. ovata*. In 1905 Dr. Schlechter, in "Ann. Nat. Hoffmus. Wien," described three species, *R. chrysantha*, *R. Harmsiana*, and *R. Pentheri*. In 1907, in the "Vierteljahrschrift Nat. Ges. Zurich," Dr. Schinz described *R. cinnamomea*, *R. congestiflora*, *R. elegantissima*, *R. Fleckii*, *R. namaensis*, and *R. Rehmanni*, and in 1910

the same author, in the same publication, described the very distinct *R. spectabilis*. I am doubtful whether *R. cinnamomea* is distinct from *Dolicholus venulosus*, Hiern. (*R. venulosus*, K. Schum.), and I think *R. Rehmanni* is synonymous with *Fagelia bituminosa*, D.C. In 1906 Dr. Bolus, in "Trans. S. Afr. Phil. Soc.," XVI, 383, described the curious and aberrant *R. pauciflora*. I hardly think *R. uncinata*, Schlechter, from Paekhuis Berg, is separable from *R. bullata*, Benth. In 1913, in "Bull. Soc. Bot. Fr.," LX, 461, Gandoger quite correctly segregated the *R. memnonia* of Harvey, calling the silvery plant with a rigid stem *R. albissima*.

Several plants have been issued with ms. names to which I must allude. Wilms No. 375 I would place as synonymous with *R. monophylla*, Schlechter; Wilms No. 387 appears to me to be a form with more angled leaves than usual of *R. sigmodes*, Benth. I have retained *R. graciliflora*, Harms, founded on Wilms No. 367, as a variety of *R. Totta*, D.C.; it differs in the shape of the leaflets from the typical form. Quite recently in the "Kew Bulletin" Mr. Burtt-Davy described *R. unifoliolata*. It is also a close ally of the true *R. Totta*, D.C., but is sometimes unifoliolate, and has shorter petioles. A little later in the same publication he also describes *R. confusa*, *R. Burkei*, *R. Harmsiana* Schl., var. *Burchellii*, and *R. Pentheri* Schl., var. *Hutchinsoniana*. With *R. Burkei* and *R. Pentheri*, Schl., var. *Hutchinsoniana*, he has associated my name.

NOTES ON TAXONOMY.

Harvey, in the "Flora Capensis," arranges the species of *Rhynchosia* then known to him in four sections: (i) **Chrysoscias**; (ii) **Polytropia**; (iii) **Copisma**; and (iv) **Orthodanum**. The first of these is well marked by the character of the inflorescence, which is generally umbellate, more rarely the flowers are solitary. The leaflets are narrow and either tomentose or villose below. This section I retain as originally delimited.

The section **Polytropia** is at once recognized by having pinnate or bipinnate leaves. But there is a difficulty with regard to the sections **Copisma** and **Orthodanum**. Certain plants in these sections are very distinct from one another; take, for instance, *R. adenodes*, Ecklon and Zeyher, and *R. minima*, D.C., with a distinctly voluble stem, which is the main character of Harvey's **Copisma**, and **R. Orthodanum**, Benth., which is erect, rigid, and suffruticose, and which is the type of Harvey's section **Orthodanum**. But there are certain intermediate plants which are difficult to place. Take, for instance, *R. viscidula*, Steud.: the plant from Little Namaqualand has a somewhat rigid stem and cannot be correctly placed in **Copisma**. I have, therefore, thought it advisable to unite the sections **Copisma** and **Orthodanum**, and am calling this section **Eurhynchosia**.

I have introduced the section **Cyanospermum**, Benth., for *R. cyanosperma*, Benth. It may be easily recognized by the robust voluble stem, the racemose inflorescence, the broad calycine segments, which are densely matted on the back with a grey tomentum, and the dark blue seeds. I am also introducing the section **Arcyphyllum** Torrey and Gray for two species which occur south of the Tropic. The stem in this section is voluble, the flowers are in dense, oblong, sessile, subsessile, or pedunculate clusters, and with the calycine teeth much narrower than in section **Cyanospermum**.

There are one or two anomalous species which require consideration. One of these is *R. pauciflora*, Bolus, with solitary pedicellate flowers and broad calycine lobes. It comes from the Transvaal and Swaziland. *R. ficifolia*, Benth., I am excluding from the genus. It is a *Pueraria*. Some species from Great Namaqualand such as *E. namaensis*, Schinz, I have not included, as it is recorded from Rehoboth, which is just north of the Tropic.

DESCRIPTION OF SPECIES.

SECT. I.—CYANOSPERMUM, Benth., in Benth. and Hook "Gen. Plant" (1865), 543.

Stem voluble, robust. Inflorescence racemose. Calyx as long as or slightly longer than the corolla, segments rather broad, subequal in length, uppermost connate. Seeds dark blue.

1 **R. cyanospermum**, Benth., *ex* Baker in Oliver, "Fl. Trop. Afr.," II, 218.

Stems voluble, robust, densely grey or ferruginous-pubescent when young. *Stipules* ovate, pubescent. *Leaves* trifoliolate; leaflets coriaceous; terminal leaflet ovate or sub-orbicular, below densely grey-tomentose; lateral leaflets unequalsided. *Flowers* rather large, in racemes. *Bracts* ovate, deciduous. *Calyx* 18–20 mm. long or rather more, densely matted on the back with grey tomentum; tube short; lobes uppermost, somewhat spatulate, the others blunt, 4–5 mm. broad. *Corolla* about as long as the calyx; standard obovate; carina boat-shaped, base unguiculate. *Pod* oblong, equalling the calyx; seeds dark blue.

NATAL.—Lower Illovo, *Wood* No. 6507, Natal Herb.

SECT. II.—ARCYPHYLLUM, Torr. and Gray, "Fl. North. America" (1838), 284.

Stem voluble. *Flowers* in dense oblong, sessile, or subsessile, or shortly-stalked clusters. *Calyx* teeth narrow, sometimes more or less connate, slightly shorter than, or same length as, the corolla. *Seeds* brown or black, not blue.

+ *Terminal leaflet ovate, subrotund, acuminate.*

2. **R. densiflora**, D.C., "Prod.," II, 386; Baker in Hooker, "Fl. Brit. India," II, 226; Baker *ex* Oliver, "Fl. Trop. Afr.," II, 222.

Glycine densiflora, Roth., nov. sp. 348; *Desmodium punctatum*, D.C., "Prod.," II, 338.

Stem slender, firm-herbaceous, voluble, grey pilose. *Stipules* lanceolate. *Leaves* trifoliolate, papyraceous; terminal leaflets broadly ovate acuminate; petiolules of terminal leaflets 10–18 mm. long; lateral leaflets unequalsided. *Flowers* in dense, oblong, subsessile clusters. *Bracts* lanceolate. *Calyx* 12–15 mm. long, teeth narrow, subequal, two uppermost more or less connate; tube short. *Standard* glabrous, auriculate, about 15 mm. long; wings unguiculate, distinctly shorter than the carina; carina boat-shaped, obtuse. *Pod* 12–14 mm. long, rather narrowed at both ends, grey pubescent.

NATAL.—*Gerrard* No. 1737; Camperdown Div., *Wood* No. 11706.

TRANSVAAL.—Makapansberg, *Rehmann* No. 5548; Potgietersrust, *Leendertz* No. 146, 1216; Barberton, *Thornicroft* No. H. 11274; Pienaars River, *Leendertz* No. 783.

+ + *Terminal leaflet rhomboid-ovate, generally obtuse.*

3. **R. connata**, sp. nov.

Caulis volubilis, pubescens, longitudinaliter striatus. *Stipulae* ovatae, acutae; stipellis ad basin petiolorum minutis linearibus. *Folia* trifoliolata; foliolis terminalibus rhomboid-ovatis apice obtusum vel rarius subacutis, 3–4 cm. longis et latis; lateralibus inaequaliter, petiolo communi 4–5 cm. longo praedita; foliolis terminalibus petiolulis 8–10 mm. longis suffultis. *Flores* flavi in capitula densa disposita; capitulis breviter pedunculatis. *Calycis lobis* 2 superioribus plus minus connatis, reliquiis lineari-lanceolatis. *Vexillum* apice emarginatum; alae oblongae basi unguiculatae; carina naviculariformis apice obtusa. *Ovarium* pilis vestitum; stylo gracili. *Legumen* ignotum.

NATAL.—Camperdown, *Miss Franks* No. 1250.

Ally of *R. Stuhlmanni*, Harms in Engler's "Bot. Jahrb.," XXVI, 308.

SECT. III.—CHRYSOSCIAS, Benth., *ex* Harvey and Sonder, "Fl. Cap.," II, 249.

Stem voluble. *Leaves* pinnately trifoliolate. *Stipules* broad. *Flowers* in axillary umbels or solitary.

Series 1.—*Calyx* large, 15–18 mm. long. *Flowers* in umbels rarely solitary. *Underside of leaf fulvous-villose.*

4. **R. chrysoscias**, Benth., *ex* Harvey and Sonder, "Fl. Cap.," II, 249; Oliver in "Bot. Mag.," t. 5913.

Chrysoscias grandiflora, E. Mey., "Comm.," 139; *Glycine erecta*, Thunbg., "Fl. Cap.," 592; *Cylista lancifolia*, Ecklon and Zeyher, Herb. No. 1690.

A climbing suffrutex with voluble stem, and the younger parts clothed with tawny or yellowish hairs. *Stipules* broad. *Leaves* pinnately trifoliolate, thinly pubescent above, tomentose or villose below; terminal leaflets oblong-lanceolate with revolute margins 3·5–5 cm. long, 8–15 mm. broad; petioles 5–15 mm. long. *Peduncles* bearing 3–4 flowers at the summit. *Calyx* 15–18 mm. long; tube short; segments lanceolate; the two upper somewhat connate at the base. *Pod* not much longer than the calyx, pilose.

CAPE.—Districts George and Knysna, Plettenbergs Bay, Zeyher No. 1690.

Chrysoscias media, E. Mey., from Kaymans Gat, is a close ally.

Series 2.—*Calyx* silky-silvery, 15–20 mm. long, upper lobes connate to or beyond the middle. *Underside of leaf* white tomentose.

5. *R. leucoscias* Benth., ex Harvey, l.c. II, 249.

Cylista argentea, Ecklon and Zeyher, 1688; *Cylista angustifolia*, E. Mey., in "Linnaea," VII, 171; *Chrysoscias calycina*, E. Mey., "Comm.," 140.

Suffruticose voluble, albo-villose. *Stipules* broadly oblong, obtuse or subacute. *Leaves* trifoliolate, very shortly petiolate; terminal leaflets with revolute margins, oblong-lanceolate or linear, white tomentose below, 4–5·5 cm. long, 5–7 mm. broad in the middle; common petioles 2–4 mm. long. *Peduncles* umbelliferous. *Calyx* silky-silvery; tube very short; segments lanceolate, leafy, silky and silvery. *Corolla* two uppermost segments connate to or beyond the middle, glabrous; standard 14–16 mm. long. *Pod* not seen.

CAPE.—Van Stadensberg, Ecklon and Zeyher.

Var. *angustifolia*, Harvey, l.c. 249.

Leaflets narrower, narrow-linear. *Flowers* sub-solitary.

CAPE.—Caledon Div., River Zondereinde, Zeyher No. 2410.

Distinguished from *R. chrysoscias*, Benth., by its much whiter and woolly tomentum and the connate upper calyx lobes.

Series 3.—*Calyx* cano-pubescent, 6–9 mm. long; upper lobes connate to middle. *Umbels* 4–8-flowered.

6. *R. microscias*, Benth., ex Harvey, l.c. 249

Chrysoscias parviflora, E. Mey., "Comm.," 139.

Suffruticose voluble, silky-canescens. *Stipules* ovate-lanceolate, 4–6 mm. long. *Leaves* trifoliolate, on very short petioles; terminal leaflets linear-lanceolate or linear, 3–4 cm. long, 4–7 mm. broad, canescent and tomentulose beneath; common petioles 2–4 mm. long; lateral leaflets slightly unequal-sided at the base. *Peduncles* bearing umbels of 4–8 flowers. *Flowers* much smaller than in *R. leucoscias*, Benth. *Calyx* tube very short; segments lanceolate, cano-pubescent, shorter than the standard. *Standard* 10–12 mm. long, glabrous; carina glabrous, obtuse. *Pod* pilose, 15–20 mm. long, mucronate.

CAPE.—Mountain sides, near George, Drège; Knysna, Tyson, Bowie; Humansdorp Div., Zitzikama, E. Galpin No. 3989.

Known at once from the preceding by the smaller flowers and shorter indumentum.

Series 4.—*Flowers* solitary.

7. *R. angustifolia*, D.C., "Prod.," II, 388.

R. uniflora, Harvey, l.c. II, 249; *Glycine angustifolia*, Jacq., "Hort. Schoenb.," II, t. 231; *Cylista angustifolia*, Ecklon and Zeyher No. 1689.

Stem voluble, silky-canescens. *Stipules* ovate, subacute. *Leaves* trifoliolate, very shortly petiolate; leaflets lanceolate or linear, with revolute margins, whitish or tomentose below; terminal leaflets 15–25 mm. long and about 2–3 mm. broad; terminal petiolule silky canescent, 2–3 mm. long; lateral leaflets shorter than terminal. *Flowers* solitary,

axillary, on short pedicels. *Calyx* 13–15 mm. long, grey-villous; tube very short; segments lanceolate, not much shorter than the petals; two uppermost somewhat connate. *Standard* glabrous, 13–15 mm. long. *Pod* not seen.

CAPE.—Purpas Valley and Zwarteberg, near Caledon, *Ecklon* No. 1689.

This plant is easily recognized by the voluble stem, the very narrow trifoliolate leaves, and the solitary axillary flowers with a silky villous calyx. It must take De Candolle's earlier name of *R. angustifolia*.

SECT. IV.—POLYTROPIA, Harvey and Sonder, "Fl. Cap.," II, 248.

Stem prostrate or trailing. Leaves pinnate or bipinnate, plurijugate. Flowers racemose.

Series 1.—*Leaves pinnately decomposed.*

8. ***R. ferulaefolia***, Benth., *ex* Harvey, l.c.

Polytropia ferulaefolia, "Presl. Symb.," t. 13; *Psoralea prostrata*, "Linn.," sp. pl. 762; *Galega pinnata*, Thunberg, "Fl. Cap.," 602; *Polytropia umbellata*, Ecklon and Zeyher No. 1627.

Prostrate, nearly glabrous. *Stipules* rather short. *Leaves* pedately bipinnate, paucijugate or supra-decompound; leaflets sessile, narrow-lanceolate or linear, acute at each end, varying from about 5–20 mm. long; common petiole generally 2–4 cm. long, glabrous or nearly so. *Peduncles* longer than the leaves, bearing a cluster of 5–12 flowers towards the apex; pedicels 1–3 mm. long. *Flowers* viscoso-pubescent. *Calyx* with lowest segment conspicuously narrower than the rest. *Standard* 7–9 mm. long. *Pod* 12–16 mm. long, subfalcate or nearly straight, nearly glabrous.

CAPE.—Common on the Cape Flats and in several parts of the western districts. There is a specimen of this in Herb. Sloane, from the Cape, gathered by Oldenland. This will certainly be one of the earliest records for this species.

Series 2.—*Leaves simply pinnate.*

9. ***R. pinnata***, Harvey, "Thes.," t. 79; Harvey in Harvey and Sonder, l.c. 250.

Polytropia pinnata, Ecklon and Zeyher No. 1628.

Whole plant minutely downy, prostrate. *Stipules* ovate, striate, deflexed. *Leaves* simply pinnate, bi- to tri-jugate; terminal leaflet rhomboid-ovate or obovate, 6–12 mm. long; lateral leaflets generally elliptic-oblong, impresso-punctate. *Peduncles* elongate, 5–6-flowered near the summit. *Calyx* pubescent, 6–7 mm. long; lowest segment narrower than the others, shorter than the petals. *Standard* yellow, 6–8 mm. long, glabrous or nearly so; carina about same length as the standard. *Pod* not seen, stated by Harvey to be the same as in *R. ferulaefolia*, Benth.

CAPE.—Saldanha Bay, *Ecklon and Zeyher* No. 1628.

SECT. V.—EURHYNCHOSIA (incl. *Copisma* and *Orthodanum*).

Stem voluble or rigid. *Leaves* trifoliolate or rarely unifoliolate. *Inflorescence* generally racemose, but flowers sometimes solitary or subsolitary. *Calyx* generally shorter than the corolla; segments generally lanceolate. *Seeds* brown, or reddish-brown, or black, not blue (in those species in which the seeds are known).

CLAVIS OF SPECIES.

A.—Stems voluble or subvoluble.

(a) Bracts persistent.

—Leaves trifoliolate.

Glabrous or nearly so..... *R. rotundifolia*, Walp.

Hairy..... *R. grandifolia*, Steud.

— —Leaves unifoliolate..... *R. simplicifolia*, E. Mey.

- (b) Bracts caducous, rarely subsistent.
- × Terminal leaflets broad.
- + Flowers fasciculate. Leaves uni- or tri-foliolate; leaflets orbicular-ovate or ovate..... *R. monophylla*, Schl.
- ++ Peduncles short, generally shorter than the leaves, racemose, laxly few-flowered.
- Flowers small, 5–10 mm. long.
- Terminal leaflets orbicular-rhomboid, obtuse, softly pubescent or velvety..... *R. Harveyi*.
- Terminal leaflets rhomboid-ovate. Leaves fulvous.... (*R. secunda*, Harvey.)
- Terminal leaflets obovate, nearly glabrous..... *R. secunda* (Thunberg).
- Terminal leaflets obovate. Leaves grey pubescent.... *R. Burkei*, Burttt-Davy and Bak. fil.
- Terminal leaflets elliptic-oblong or subrhomboid..... *R. Fleckii*, Schinz.
- Flowers larger, 12–14 mm. long. Terminal leaflets broadly rhomboid..... *R. confusa*, Burttt-Davy.
- +++ Peduncles long, generally longer than the leaves, laxly few-flowered.
- ∓ Standard glabrous.
- Terminal leaflets ovate or broadly ovate, 3–4.5 cm. long, 2.5–4 cm. broad. Stem cinereous pubescent..... *R. reptabunda*, N.E.Br.
- Terminal leaflets ovate or suborbicular-ovate, 2–3 cm. long, 2.5–4 cm. broad. Stem cinereous pubescent..... *R. Jacottetii*, Schinz.
- Terminal leaflets broadly ovate or suborbicular. Stems markedly pilose..... *R. ovata*, Wood & Evans.
- Terminal leaflets ovate or rhomboid-ovate. Stems puberulous. *R. Harmsiana*, Schlechter.
- Terminal leaflets rigid, subrhomboid or elliptic-oblong. Stems hispido-pubescent or villous..... *R. nervosa*, Benth.
- Terminal leaflets thin, ovate-rhomboid. Stem thinly pubescent. Upper calycine segments short and broad..... *R. caribaea*, D.C.
- Terminal leaflets triangular-ovate. Stem pubescent..... (*R. gibba*, E. Mey).
- Terminal leaflets broadly ovate-suborbicular, rigid hispido-pubescent. Stem patently hairy..... *R. Dieterlenae*, Bak. fil.
- Terminal leaflets broadly ovate, rather thick, canotomentose below. Stem tomentose..... *R. hirsuta*, Ecklon and Zeyher.
- Terminal leaflets broadly ovate, rather thick, canotomentose below. Stem tomentose..... *R. argentea*, Harvey.
- ++++ Peduncles longer than the leaves, generally laxly many-flowered, occasionally subdense towards the apices.
- Flowers small, 6–9 mm. long. Terminal leaflets rhomboid-ovate or rhomboid-ovate..... *R. minima*, L.
- Flowers larger, 10–15 mm. long.
- Terminal leaflets ovate-triangular, pubescent..... *R. stenodon*, Bak. fil.
- Terminal leaflets rhomboid-ovate. Standard pubescent. *R. memnonia*, D.C., var. *prostrata*, Harvey.
- Terminal leaflets thin, rhomboid-triangular. Standard glabrous..... *R. Harmsiana*, Schl., var. *grandifolia*, Bak. fil.
- Terminal leaflets thick, velvety, elliptic-ovate. Standard pubescent..... *R. crassifolia*, Benth. (*R. longipes*, Harms.).
- Terminal leaflets suborbicular or ovate. Standard glabrous. Calyx glandular..... *R. Petheri*, Schlechter.
- Terminal leaflets rhomboid-ovate, copiously dotted below. Standard glandular..... *R. adenodes*, Ecklon and Zeyher.
- ++++ Peduncles longer than the leaves. Racemes dense.
- Terminal leaflets suborbicular, dotted below..... *R. adenodes*, Ecklon and Zeyher, var. *Cooperi*, Bak. fil.
- Terminal leaflets large, cordate-ovate or suborbicular, rugose, thick, velvety..... *R. sigmodes*, Benth.
- Terminal leaflets ovate-suborbicular..... *R. chrysantha*, Schlechter.
- ×× Terminal leaflets narrower.
- Leaflets elliptic-oblong or oblong. Peduncles 1–2-flowered, shorter than the leaves. Stem prostrate or voluble.... *R. puberula*, Harvey.

- Leaflets in typical form, ovate-oblong or elliptical, in forma *angustifolia*, lanceolate-oblong. Peduncles 1-3-flowered
 Leaflets narrow-lanceolate. Peduncles 2-flowered. Flowers larger than in *R. Totta*, D.C.....
 Leaflets elliptical. Racemes very lax, few-flowered. Stem voluble. Indumentum cinnamon coloured.....
- R. Totta*, D.C.
R. longiflora, Schinz.
R. venulosa, K. Schum. (*R. cinnamomea*, Schinz.)
R. elegantissima, Schinz.
R. glandulosa, D.C.
R. rigidula, D.C.
- Leaflets lanceolate, more or less sericeous. Raceme very lax. Stem voluble.....
 Leaflets oblong-lanceolate or ovate. Peduncles 1-6-flowered near the summit. Stem voluble, glabrous, or minutely downy.....
 Leaflets linear or linear-lanceolate. Peduncles generally one-flowered.....
- B.—Stem rigid or subrigid.
- + Peduncles generally shorter than the leaves, few-flowered.
 Silky villous or glabrous. Leaflets elliptic-oblong or lanceolate-oblong.....
 Canotomentose. Terminal leaflets broader than long.....
 Cinnamon-coloured tomentum. Terminal leaflets oval or oval-suborbicular.....
 Pubescent. Terminal leaflets ovate or orbicular-ovate.....
 Velvety when young. Terminal leaflets ovate-lanceolate. Flowers large.....
 Silky silvery. Leaflets broadly ovate or cordate-ovate. Flowers 16-18 mm. long.....
 Silky silvery. Leaflets larger, oblong-obovate. Flowers 20-23 mm. long.....
- R. Orthodanum*, Benth.
R. spectabilis, Schinz.
R. Rudolfi, Harms.
R. komatiensis, Harms.
R. clivorum, S. Moore.
R. nitens, Benth.
R. Galpini Bak. fil.
- ++ Flower pedicellate.
 Terminal leaflets rhomboid-ovate or suborbicular-ovate. Flowers 17-19 mm. long.....
- +++ Peduncles scarcely longer than the leaves, 1-2-flowered. Shrubby, erect, viscidly hairy and resin-dotted. Flowers 13-16 mm. long.....
- R. Bakeri*, Schinz.
R. bullata, Benth. (*R. uncinata*, Schltr.)
- ++++ Peduncles about as long as the leaves, or slightly longer, several to many flowered. Flowers 8-16 mm. long.
 Hairy and somewhat silvery. Terminal leaflets elliptical. Flowers 14-16 mm. long.....
 Pubescent. Terminal leaflets oblong-obovate. Flowers 11-13 mm. long.....
 Canotomentose. Terminal leaflets obovate. Flowers 8-12 mm. long.....
 Pubescent. Terminal leaflets rhomboid-ovate. Flowers 10-11 mm. long.....
- R. angulosa*, Schinz.
R. Woodii, Schinz.
R. albissima, Gandoger.
R. Pegleri, Bak. fil.
- +++++ Peduncles longer than the leaves, always one-flowered. Leaflets rigid, narrow, margins distinctly revolute.....
- +++++ Peduncles longer than the leaves, few-flowered glandular plants.
 Lateral leaflets obtuse.....
 Lateral leaflets ovate-lanceolate, acute.....
- R. pauciflora*, Bolus.
R. viscidula, Steud.
R. Schlechteri, Bak. fil.

A.—STEM VOLUBLE. BRACTS PERSISTENT.

Series 1.—Leaves trifoliolate, leaflets small, orbicular or ovate.

10. *R. rotundifolia*, Walp. Rep. I, 787; Harvey, l.c. 250.

Copisma rotundifolium, E. Mey., "Comm.," 137.

Prostrate. Stem flexuous, angled. *Stipules* small, striate, about 4 mm. long. *Leaves* trifoliolate, on rather long filiform petioles; leaflets ovate or orbicular, netted-veined and resin-dotted, glabrous or nearly so; terminal leaflets 10-13 mm. long, 9-11 mm. broad; common petiole 3-4 cm. long. *Peduncles* elongate, densely racemose near the summit. *Flowers* rather large, 12-14 mm. long. *Bracts* broadly ovate, persistent. *Calyx* 5-6 mm. long; lowest segment longest, subglabrous. *Corolla* glabrous; standard broadly ovate or orbicular; keel broadly falcate. *Pod* not seen.

CAPE.—Pondoland : Omsamcaba, *Drège*.

Known by the broadly ovate persistent bracts, the trifoliolate leaves on rather long filiform petioles.

Series 2.—*Leaves trifoliolate or unifoliolate ; leaflets rather large, pubescent.*

+ *Leaves trifoliolate.*

11. **R. grandifolia**, Steud., "Nom., ed. 2, II, 454 ; Harvey, l.c. 250.

Copisma grandifolium, E. Mey., "Comm.," 138.

Procumbent robust hirsuto-pubescent. *Stipules* broadly cordate. *Leaves* trifoliolate, subsessile or petiole very short ; terminal leaflets ovato-subrotund, hispid-pubescent, 5–6 mm. long, 4–5.5 cm. broad ; lateral leaflets unequalsided. *Peduncles* elongate, longer than the leaves, closely spicate-racemose beyond the middle. *Bracts* ovate-oblong, acute, persistent, hairy. *Calyx segments* lanceolate ; uppermost semiconnate ; lowest subulate. *Corolla* glabrous ; standard striped on the back ; wings shorter than the standard ; keel boat-shaped. *Young pod* hirsute.

CAPE.—Near Kat River, *Drège* ; at foot of Winterberg, *Mrs. Barber* ; Kingwilliamstown, *Flanagan* No. 2137 ; Kreil's Country, *Bowker*.

Known by the elongate peduncle spicate-racemose beyond the middle, the rather showy flowers, and persistent ovate-oblong acute bracts.

++ *Leaves unifoliolate.*

12. **R. simplicifolia**, E. Mey., "Comm.," 138 ; Harvey, l.c. 251.

Described as being very closely allied to *R. grandifolia*, Walp., but the leaves are simple. *Stipules* cordate-ovate, acuminate. *Bracts* ovate-lanceolate.

TRANSKEI.—Umtata, *Drège*.

Only known to me from E. Meyer's description. It is possibly a unifoliolate form of *R. grandifolia*, Walp.

B.—STEM VOLUBLE. BRACTS CADUCOUS. FLOWERS FASCICULATE.

Series 3.—*Leaflets unifoliolate or trifoliolate, suborbicular, or ovate, or ovate-oblong, puberulous. Flowers 12–14 mm. long.*

13. **R. monophylla**, Schlechter in "Journ. Bot." (1897) 279.

Stem voluble, branches decumbent, filiform, elongate. *Leaves* simple or trifoliolate, suborbicular, or ovate, or ovate-oblong, reticulate nerved, 2.5–4 cm. long, 2–3 cm. broad. *Flowers* in axils of leaves, fasciculate. *Bracts* deciduous. *Calyx* \pm 6 mm. long ; segments linear, acute. *Standard* suborbicular-rhomboid, \pm 11 mm. long, 9 mm. broad ; wings unguiculate ; keel obtuse, apex incurved, glabrous. *Ovary* villous. *Pod* obliquely ovate-elliptical, very compressed, base acute, apex acuminate, \pm 11 mm. long, 5–6 mm. broad.

TRANSVAAL.—Near Barberton, *E. E. Galpin* No. 489 ; Pretoria, *Rehmann* No. 4582 ; *Rogers* No. 18942 ; *A. O. D. Mogg*, in Govt. Herb., No. 10556 ; near Witbank Station, *Gilfillan* No. 7184 ; Lydenberg, *Wilms* No. 375 ; near Barberton, *Bolus* Nos. 1142 and 7603.

Wilms No. 375 was issued with a ms. name, but it is not specifically distinct from the above.

Occurs also in Gazaland.

Var. nov. **Eylesii**, Bak. fil.

Caulis procumbens, pubescens. *Stipulae* latae, ovato-lanceolatae, 5–7 mm. longae. *Folia* saepissime trifoliolata, suprema unifoliolata, foliolis terminalibus late ovatis vel suborbiculari-ovatis, 2.5–4 cm. longis, 2.5–3 cm. latis ; petiolulis foliolorum terminalium 8–10 mm. longis ; foliolis lateralibus inaequilateralibus. *Flores* fasciculati. *Vexillum* flavum, \pm 12 mm. longum. *Legumen* immaturum pilis vestitum.

RHODESIA.—Salisbury, *F. Eyles* No. 2094. Alt. 4900 ft.

This is a procumbent herb with rather broad stipules. It differs principally from the type in the leaves being mostly trifoliolate. The standard is yellow and the wings bright red. The calyx is ± 13 mm. long (total length), the lowest segment narrow and much longer than the others. Calyx tube, ± 3 mm.

C.—STEM VOLUBLE OR SUBVOLUBLE. BRACTS CADUCOUS, RARELY SUBPERSISTENT. LEAFLETS BROAD. FLOWERS RACEMOSE.

Series 4.—*Leaflets small. Peduncles nearly as long as or slightly longer than the leaves. Flowers small, in unilateral racemes.*

+ *Leaflets softly pubescent or velvety. Stipules broadly ovate.*

14. **R. Harveyi.** (*R. secunda* Harvey, l.c. ii. 251.)

Prostrate softly pubescent or velvety. *Branches* flexuous. *Leaves* trifoliolate, petiolate; terminal leaflets orbicular-rhomboid, obtuse, 10–15 mm. long, 12–17 mm. broad; lateral leaflets unequal-sided. *Peduncles* shorter or scarcely longer than the leaves, laxly 2–4-flowered. *Calyx* 6–7 mm. long; segments longer than the tube, shorter than the glabrous standard. *Standard* ± 9 mm. long. *Keel* ± 9 mm. long. *Pod* 15–18 mm. long, narrowed towards the base, pubescent.

CAPE.—Smaldeel, *Zeyher* No. 514; near Grahamstown, *P. MacOwan* No. 160.

Flanagan No. 164 from Komgha is a form of this species.

++ *Leaflets fulvous, resin-dotted below.*

15. **R. secunda** (*Glycine secunda*, Thunberg, "Prod. Fl. Cap.," 131).

Stem herbaceous, filiform, pubescent. *Stipules* narrower than in the preceding species, lanceolate, longitudinally striate. *Leaves* trifoliolate, petiolate; terminal leaflets rhomboid-ovate, 10–15 mm. long, and nearly the same breadth, rounded at the apex; petiolules 2–3 mm. long; lateral leaflets unequal-sided, sessile or subsessile, all resin-dotted below; petioles pubescent, 8–10 mm. long. *Flowers* small, in 5–10-flowered secund racemes, which are often 3–4 cm. long. *Pedicels* very short. *Calyx* 6–7 mm. long, hairy, the lowest segment longer than the rest. *Standard* 6–8 mm. long, glabrous; keel about the same length. *Pod* not seen.

CAPE.—In campis graminosis, *Thunberg*, Herb. Thunberg.

This is a rare plant, the only specimen I have seen being in Herb. Thunberg.

Series 5.—*Leaves trifoliolate, terminal leaflets broadly obovate. Peduncles short, 5–7-flowered.*

16. **R. Burkei,** Burt-Davy and Bak. fil. in "Kew Bull.," 1921, 193.

R. adenodes, Ecklon and Zeyher, var. ? *robusta*, Harvey, l.c.

Stems prostrate, robust, longitudinally striate, pubescent. *Stipules* lanceolate. *Leaves* trifoliolate, petiolate; terminal leaflets broadly obovate, 20–25 mm. long, 23–28 mm. broad; terminal petiolules 6–8 mm. long, on both sides except the nerves nearly glabrous; lateral leaflets unequal-sided, sessile; common petiole 15–25 mm. long. *Peduncles* laxly 5–7-flowered, generally 25–30 mm. long. *Flowers* small, 7–8 mm. long. *Calyx* pubescent, + 4 mm. long. *Standard* 6–7 mm. long. *Pod* pubescent, about 12 mm. long.

ORANGE FREE STATE.—Thaba 'Nchu, *Zeyher* No. 280; *Burke* in Herb., Kew.

This is quite distinct from *R. adenodes*, Ecklon and Zeyher. It has broad, obovate terminal leaflets and a short inflorescence of quite small flowers. It does not seem to be common.

Series 6.—*Leaves trifoliolate, terminal leaflets ovate or obovate. Racemes short, few-flowered.*

+ *Terminal leaflets obovate, 20–25 mm. broad.*

17. **R. Fleckii**, Schinz in "Vierteljahrschrift Nat. Ges. Zurich," LII, 428 (1907).

Stem slender, filiform, pubescent. *Stipules* small, linear-lanceolate, pubescent. *Leaves* trifoliolate, petiolate, grey pubescent; terminal leaflets obovate, about 25 mm. long and 20–25 mm. broad; terminal petiolules pubescent, 8–10 mm. long; lateral leaflets somewhat unequalsided, also about 25 mm. long, petiolules much shorter. *Racemes* short, few-flowered. *Calyx* grey pubescent, segments narrow-lanceolate, shorter than the corolla. *Standard* 7–9 mm. long; keel boat-shaped, apex blunt. *Pod* pubescent, mucronate, 23–25 mm. long, 8–9 mm. broad at the broadest point.

KALAHARI REGION.—Uschi, *Fleck* No. 693.

Noticeable on account of the slender stem, small stipules, trifoliolate leaves covered with grey pubescence, obovate terminal leaflets, and short few-flowered inflorescence. An ally of *R. confusa*, Burt-Davy.

+ + *Terminal leaflets narrower, 12–16 mm. broad.*

18. **R. confusa**, Burt-Davy, in "Kew Bull." 1921, 192.

R. nervosa, Benth., var. *pauciflora*, Harvey, l.c.

Perennial prostrate herb, with puberulent stems. *Stipules* subulate. *Leaves* trifoliolate, cano-pubescent; terminal leaflets ovate or obovate, longer than broad, 13–20 mm. long, 12–16 mm. broad; petiolules about 5 mm. long; lateral leaflets unequalsided, common petioles tomentose, 5–10 mm. long. *Peduncles* slender, 2–4-flowered, shorter than the leaves or only slightly longer. *Pedicels* slender, 1–2 mm. long. *Flowers* about 8 mm. long. *Calyx lobes* lanceolate, acuminate, pubescent. *Standard* glabrous. *Pod* puberulous, about 2 cm. long and 7 mm. broad.

TRANSVAAL.—Magalies River, *Zeyher* No. 516; Aapjes River and Vaal River, *Zeyher* Nos. 508, 511.

ORANGE FREE STATE.—Kroonstad Dist., Rhenoster Kop, *Zeyher*; Bloemfontein, *Burt-Davy* No. 11767.

BRITISH BECHUANALAND.—Kuruman Dist., *Burchell* Nos. 2298, 2457, 2548B; Vryburg Div., near Geluk, *Burt-Davy* No. 11121.

This species is easily recognized by its trifoliolate cano-pubescent leaves and short 2–4-flowered inflorescence generally shorter than the leaves.

It also occurs in Rhodesia, Victoria Div., *Munro* No. 549.

Series 7.—*Flowers 12–15 mm. long in lax racemes. Terminal leaflets ovate, triangular, acute, or broadly rhomboid. Stem tomentulose.*

19. **R. quadrata**, Harvey, l.c. ii, 254.

Stem herbaceous, flexuous, thinly tomentulose. *Stipules* small, lanceolate. *Leaves* thin, trifoliolate, petiolate; leaflets broadly rhomboid-acute or subacuminate; terminal leaflets 20–35 mm. long, 20–38 mm. broad; terminal petiolule 5–8 mm. long, lateral leaflets unequalsided, common petioles 15–25 mm. long. *Racemes* shorter or a little longer than the leaf, 5–8-flowered. *Bracts* narrow, caducous. *Calyx* glandular, 14–15 mm. long; lowest lobe longest and nearly same length as carina. *Standard* glabrous or nearly so, 13–15 mm. long. *Ovary* glandular, biovulate. *Pod* substipitate, falcate, twice as long as calyx.

NATAL.—Port Natal, *T. Williamson*, *Peddie*; Durban, *Wood* No. 1656.

Easily recognized by its thin, rhomboid, acute leaflets, and glandular calyx and ovary.

Series 8.—*Leaves trifoliolate, leaflets ovate or broadly ovate. Peduncles longer than the leaves, towards the apex, laxly 2–6-flowered.*

+ *Terminal leaflets 3–4.5 cm. long, 2.5–4.0 cm. broad.*

20. **R. reptabunda**, N. E. Br. in "Kew Bull.," 1906, 103.

Stem herbaceous, creeping, pubescent or pilose. *Stipules* rather large, 7–11 mm. long. *Leaves* trifoliolate, petiolate; leaflets ovate or broadly ovate, 3–4.5 cm. long, 2.5–4 cm. broad, on both sides pubescent; common petiole 3–6 cm. long, puberulous and laxly pilose. *Peduncle* longer than the leaves, 5–17.5 cm. long, towards the apex laxly 2–6-flowered. *Bracts* lanceolate, 4–5 mm. long. *Pedicels* \pm 3 mm. long. *Calyx* pubescent; tube 3 mm. long, upper teeth 3–4 mm. long, lowest lanceolate-subulate, \pm 7 mm. long. *Corolla* glabrous, yellow; standard 8.5 mm. long, broadly oblong; keel about the same length as the standard, obtuse. *Ovary* densely tomentose.

NATAL.—Near Charlestown, *Wood* No. 5734; Giant's Castle, *Wood* No. 10673.

Easily recognized by the trifoliolate pubescent leaves, and the long peduncle laxly 2–6-flowered towards the apex, and large stipules.

++ *Terminal leaflets smaller, 2.5–3.0 cm. long, 28–40 mm. broad.*

21. **R. Jacottetii**, Schinz. in *Herb. Zurich*.

Stem herbaceous, pubescent or pilose. *Stipules* conspicuous, oblong or ovate-oblong, hairy, 7–10 mm. long. *Leaves* trifoliolate, petiolate; terminal leaflets broadly ovate or suborbicular-ovate, hairy, 2–3 cm. long, 2.5–4.0 cm. broad, generally broader than long; terminal petiolules 4–5 mm. long, lateral leaflets unequalsided, broad, common petioles pilose, 2–3 cm. long. *Peduncles* longer than the leaves, pilose, laxly 3–6-flowered towards the summit. *Bracts* lanceolate, pilose, subpersistent. *Pedicels* pilose. *Calyx* pilose, tube short, segments lanceolate, pilose. *Standard* glabrous, 8–10 mm. long; keel boat-shaped, obtuse, a litle shorter than the standard. *Pod* not seen.

CAPE PROVINCE.—Komgha, *R. Schlechter*, *Flanagan* No. 854; Morugha, *R. Schlechter* No. 6170.

This plant is very closely allied to the preceding and perhaps not specifically distinct. The noticeable features are the trifoliolate leaves, the terminal leaflets generally broader than long, the long peduncles much longer than the leaves, laxly 3–6-flowered near the summit.

Series 9.—*Flowers 10–12 mm. long in very lax raceme. Terminal leaflets suborbicular or broadly ovate, hirsute. Stem rufo-pilose.*

22. **R. ovata**, Wood and Evans in "Journ. Bot." (1897), 350.

Stem suffruticose, suberect, densely rufo-pilose. *Stipules* linear lanceolate, \pm 6 mm. long. *Leaves* long petiolate, trifoliolate; leaflets suborbicular or ovate, entire, base rounded, hispid, and with long hairs ciliate, about 3 cm. long, 2.5 cm. broad; lateral shortly petiolulate. *Racemes* axillary and terminal longer than the leaves, bearing a few distant flowers. *Calyx* hairy, about 7 mm. long. *Standard* obovate, 10 mm. long, base auriculate and clawed, glabrous; carina boat-shaped, apex obtuse. *Pod* oblong, acute, base narrowed, about 18 mm. long.

ZULULAND.—Near Entumeni, *Wood* No. 3987 and *Wood* No. 8534.

NATAL.—Lower Tugela, *Wood* No. 9275.

Easily recognized by the flexuous pilose stems, the suborbicular or broadly ovate leaflets, and the very lax inflorescence of yellow flowers.

Series 10.—*Flowers small, 9–10 mm. long, in var. grandiflora larger in a lax raceme. Leaflets ovate, 2–3 cm. long, 15–25 mm. broad, in typical form. Standard glabrous.*

23. **R. Harmsiana**, Schlechter, ex A. Zahlb. in "Ann. Mus. Nat. Hofmus Wien.," XX (1905), 26.

Stem voluble, branches filiform, puberulous. *Stipules* lanceolate, subulate, acuminate. *Terminal leaflets* 2–3 cm. long, 15–25 cm. broad; common petiole pubescent. *Racemes* axillary, laxly several-flowered. *Calyx* campanulate, \pm 8 mm. long; segments subulate

longer than the tube. *Standard* about 1 cm. long, lamina obovate, base auriculate; wings obliquely oblong; carina boat-shaped, obtuse. *Ovary* pilose, style filiform, glabrous.

EAST GRIQUALAND.—Between Mt. Insiswa and the River Umzinhlawa, *Krook* No. 2584.

NATAL.—*Rudatis* No. 1617; near Boston, *Wood* No. 11824.

Var. **Burchellii**, Burt-Davy in "Kew Bull.," 1921, 193.

Slender voluble herb. *Leaves* trifoliolate, terminal somewhat rhomboid, 13–20 mm. long, 9–15 mm. broad, below sparsely glandular. *Peduncles* longer than the leaves, 5–7.5 cm. long, generally laxly 5–7-flowered. *Calyx* glandular, upper lobes short, lower longer, subulate, acuminate. *Standard* glabrous, with purple-brown lines. *Pod* strigose, reaching 2 cm. long.

CAPE PROVINCE.—Near Komgha, *Flanagan* No. 796; Van Stadensberg, *Burchell* No. 4746; Kentani, *Pegler* No. 2032; Humansdorp Div., Kromme River, *Burchell* No. 4860.

EAST GRIQUALAND.—Near Clydesdale, *Tyson* No. 2073.

NATAL.—Umzumbi, *Wood* No. 3143.

Var. nov. **grandiflora**.

Folia trifoliolata, foliolis terminalibus rhombico-triangularibus apice acutis 30–45 mm. longis, 25–55 mm. latis. *Racemi* multiflori cum pedunculo, 8–10 cm. longi. *Flores* lutei, 12–15 mm. longi, longiuscule pedicellati, pedicellis 3–4 mm. longis. *Calyx* in toto 9–10 mm. longus, hirtus et glandulosus, dentibus superioribus 3–5 mm. longis, inferioribus 6–7 mm. longis. *Vexillum* extus glabrum.

NATAL.—Lundies Hill, *Wood* No. 11401, Natal Herb. No. 12427.

The leaflets are thin and covered with scattered hairs. The two uppermost teeth of the calyx are more or less connate, the lowest segment very narrow. It is allied to *R. flavissima* Hochst., but the carina is shorter and the calyx is longer. The wing petals are oblong with a short spur on one side.

Series 11.—*Flowers*, 10–13 mm. *Leaves* trifoliolate or unifoliolate, leaflets rigid, elliptic-oblong or subrhomboid. *Peduncles* generally long, laxly 3–8-flowered. *Standard* glabrous.

24. **R. nervosa**, Benth., *ex* Harvey, l.c. 253.

Stem prostrate or twining hispid-pubescent. *Stipules* small, narrow lanceolate or subulate. *Leaves* in typical form trifoliolate, shortly petiolate, terminal leaflets elliptic-oblong or subrhomboid, rigid, 3-nerved at base, hispid-pubescent 30–60 mm. long, 15–35 mm. broad, common petioles hispid-pubescent or villous, 3–15 mm. long or sometimes longer. *Peduncles* generally long, laxly 3–8-flowered. *Calyx* lobes lanceolate acuminate, longer than the tube, shorter than the standard. *Standard* glabrous, 8–12 mm. long. *Pod* sessile, villous.

CAPE.—Sand River and Langspruit, *Zeyher*; Winterberg, *Ecklon and Zeyher*.

NATAL.—Near Intshanga, *Wood* Nos. 6231 and 6545; near Gillits, *Wood* No. 7990; Claremont, *Wood* No. 7994.

EAST GRIQUALAND.—Clydesdale, *Tyson* No. 1056.

TRANSVAAL.—Lydenberg, *Wilms* No. 381; Hoogeveld, *Wilms* No. 385; Pretoria, *A. O. D. Mogg* No. 15636; Vereeniging, *Rogers* No. 11904; Kaalfontein, *Pole-Evans* No. H.16796; Jeppestown Ridge, Johannesburg, *Gilfillan* No. 54; Barberton, *E. Galpin*, No. 1003.

Forma **unifoliolata**, Bak. fil.

Caules teretes, flexuosi. *Folia* saepissime unifoliolata, late ovata, petiolo brevi suffulta. *Racemi* laxi, 2–5-flori, foliis longiores. *Flores* + 1 cm. longi. *Vexillum* glabrum.

NYLSTROOM.—*Mrs. De Jongh* No. 6521.

R. nervosa, Benth., differs from *R. hirsuta*, Ecklon and Zeyher, in its shorter petioles, its glabrous standard, and narrower stipules. The petals are yellow, with reddish striations. *R. nervosa*, Benth., var. *pauciflora*, Harvey, is *R. confusa*, Burtt-Davy. Zeyher No. 515, referred here doubtfully by Harvey, is *R. venulosus*, K. Schum.

Series 12.—Flowers, 12–18 mm. Leaves trifoliolate, terminal leaflets ovate-rhomboid, acute. Racemes longer than the leaves, laxly several-flowered.

25. **R. Caribaea**, D.C., "Prod.," II, 384; Baker in Oliver "Fl. Trop. Afr.," II.

E. gibba, E. Mey., "Linnaea," VII, 170; *R. acuminata*, Ecklon and Zeyher, 1666; *Copisma gibbum* E. Mey., "Comm.," 137.

Stems elongate, voluble or prostrate, generally pubescent. Stipules minute. Leaves trifoliolate, petiolate; terminal leaflet ovate-rhomboid, acute or sometimes obtuse, membranous, generally 2–4 cm. long and 2–3 cm. broad; lateral leaflets unequal-sided; common petiole 1–2 cm. long. Racemes longer than the leaves, laxly several-flowered, pedicels 2–4 mm. long. Calyx upper segments short and broad, lowest conspicuously longer, subulate. Standard glabrous, broadly ovate; wings oblong, base unguiculate; keel boat-shaped, base unguiculate. Pod falcate, much longer than the calyx, 24–30 mm. long.

CAPE.—Districts Uitenhage, Ecklon No. 1667, Alexander No. 117; Somerset Div., Burchell No. 3344, Bowker, Burchell Nos. 3096 and 2997; East London, E. Galpin No. 5684; Schoonmstrom and Doornkop, Burke; Mossel Bay, Rogers No. 13348.

NATAL.—Gerrard No. 1902; Weenen, Wood No. 4470; Karkloof, Wood No. 7209; near Durban, Wood No. 7576.

BRITISH KAFFRARIA.—Mrs. Hutton.

DELAGOA BAY.—J. Monteiro No. 14.

TRANSVAAL.—Wakkerstroom, Beeton No. 12526.

Var. **pictam** (*E. gibba*, E. Mey., var. *pictum*, Benth.).

Copisma pictum, E. Mey. "Comm.," 135.

A more densely pubescent or tomentulose plant.

CAPE.—Somerset, Bowker; Howisons Poort, Mrs. Hutton; East London, E. Galpin No. 5685; Port Alfred, Burchell No. 4094; Komgha, Flanagan No. 719.

NATAL.—Inanda, Wood No. 692; Dist. Alexandra, Rudatis No. 896.

SWAZILAND.—Miss Stewart No. 4. ZULULAND.—Ngoye, Wood No. 10333.

Var. nov. **Thorncroftii**.

Leaves trifoliolate, terminal leaflets rhomboid-ovate, subacuminate. Flowers 15–18 mm. long, larger than type.

TRANSVAAL.—Saddleback Mnts., Barberton, alt. 5000 ft., G. Thorncroft No. 849; Barberton, E. Galpin No. 1308, is allied to var. *picta* (Benth.).

Series 13.—Flowers small, 9–11 mm. long, in 3–8-flowered racemes. Terminal leaflets triangular-ovate, apex acute.

26. **R. Dieterlenae**, Bak. fil., sp. nov.

Caulis volubilis, gracilis, pubescens. Stipulae angustae, 4–6 mm. longae. Folia trifoliolata, foliolis terminalibus triangulari-ovatis, apice acutis, 3–4 longis, 2.5–3.0 cm. latis, lateralibus inaequalateralibus, petiolo 20–25 longo suffulta. Flores parviusculi in racemos pauci vel plurifloros dispositi, 9–11 mm. longi. Racemi 3–7 cm. longi, saepius 3–8-flori. Calyx in toto 5 mm. longus, dentibus superioribus breviusculis. Vexillum 9–10 mm. longum, extus glabrum. Carina 9–10 longa. Ovarium pilis vestitum. Legumen ignotum.

BASUTOLAND.—Leribe, Mrs. Dieterlen No. 840. Natal Herb. No. 15418.

An ally of *R. minima*, D.C. The racemes are 3-8-flowered, the stipules narrow, and the flowers 9-11 mm. long. The terminal leaflets are longer and larger than in *R. minima*, D.C., and the carina is tipped with blue. The standard is glabrous externally. The young inflorescence is very hirsute.

Series 14.—*Flowers*, 10-12 mm. *Leaflets broadly ovate-orbicular, rigid, hispid-pubescent. Peduncles laxly 3-12-flowered. Standard pubescent.*

27. *R. hirsuta*, Ecklon and Zeyher, "Enum.," 256; Harvey, l.c. 252.

Copisma diversifolium, E. Mey., "Comm.," 135.

Stem widely spreading, flexuous, hirsute. *Stipules* ovate, acute. *Leaves* trifoliolate, petiolate; terminal leaflets broadly ovate-orbicular or rhomboid-ovate, rigid hispid-pubescent, generally 2-5 cm. long, 2.5-4 cm. broad; petioles 1-2 cm. long, hirsute. *Peduncles* elongate, laxly and distantly 3-8 or sometimes more flowered. *Flowers* 10-12 mm. long. *Standard* densely pubescent, about 10 mm. long; carina boat-shaped, 8-10 mm. long. *Pod* sessile, villous, 18-24 mm. long.

CAPE.—Philipstown, Ecklon and Zeyher No. 1676; Queenstown, E. Galpin No. 1587.

EAST GRIQUALAND.—Near Clydesdale, Tyson Nos. 1448 and 2193.

BASUTOLAND.—Leribe, Mrs. Dieterlen No. 6841.

TRANSVAAL.—Magaliesberg, Burke and Zeyher.

Var. *angustifolia*, Harvey, l.c. 252.

Upper leaves oblong, lower ovate.

NATAL.—Port Natal, Gueinzins.

Series 15.—*Flowers*, 13-15 mm. *Leaves* trifoliolate, terminal leaflets ovate, thickish, canotomentose below. *Peduncles* generally longer than the leaves, laxly few-flowered.

28. *R. argentea*, Harvey, l.c. ii, 253.

Glycine argentea, Thunb., "Fl. Cap.," 292.

Stem voluble, tomentose. *Stipules* ovate, acute. *Leaves* trifoliolate, petiolate; terminal leaflets ovate, thickish, canotomentose below, 15-33 mm. long, 13-22 mm. broad; terminal petiolules 3-6 mm. long; common petioles 10-16 mm. long. *Peduncles* generally longer than the leaves, occasionally shorter, laxly few-flowered. *Pedicels* rather long, 4-6 mm. *Calyx* pubescent, its upper segments broadly lanceolate, lowest rather longer subulate. *Standard* pubescent. *Pod* not seen.

CAPE.—Thunberg, Burchell No. 5122; Knysna, Newdigate No. 207; Stockenstrom, W. C. Scully No. 4886.

There is a specimen of *Glycine argentea* in Thunberg's Herbarium which agrees with that of Burchell.

This species is easily recognized by the broadly ovate leaflets canotomentose below. The flowers are rather large, 13-15 mm. long.

Series 16.—*Flowers* small, 6-8 or 9 mm. long. *Terminal leaflets* rhomboid-ovate or rhomboid-ovate.

29. *R. minima*, D.C., "Prod.," II, 385; Harvey, l.c. ii, 254.

Dolichos minimus, "Linn.," sp. pl. 726; *Copisma tenue* and *Copisma falcatum*, E. Mey., "Comm.," 136.

Stem slender, voluble, thinly downy or glabrescent. *Stipules* small, narrow. *Leaves* trifoliolate, petiolate; terminal leaflets rhomboid-ovate or rhomboid-ovate, varying much in size and shape; lateral leaflets unequal-sided; common petiole 5-25 mm. long. *Racemes* laxly several or many flowered, longer than the leaves. *Flowers* small, 6-9 mm. long. *Calyx* 3-4 mm. long, lowest lobe longer than the others, much shorter than the petals. *Standard* orbicular-ovate, 5-7 mm. long. *Carina* boat-shaped. *Pods* falcate, 10-17 mm. long, about 4 mm. wide, puberulent, seeds brown.

NATAL.—Durban, *Wood* No. 7556; Port Natal, *Dr. Grant*; near Durban, *Wood* No. 6383.

TRANSVAAL.—Barberton, *E. Galpin* No. 1196; Shilouvane, *Junod* No. 1114; Potgietersrust, *Leendertz* No. 2328, *H. Bolus* No. 11120; Komatipoort, *R. Schlechter* No. 11773.

LOURENCO MARQUES.—*R. Schlechter* No. 11566.

A widely spread little plant. May be recognized by the lax raceme of small flowers, 6–8 or sometimes 9 mm. long.

Series 17.—*Flowers* 10–12 mm. long in lax 10–24-flowered racemes. *Terminal leaflets* ovate-triangular, acute. *Stem* rufous hirsute.

30. *R. stenodon*, sp. nov.

Caulis volubilis rufo-hirsutus. *Stipulae* lanceolatae, acuminatae, rufo-hirsutae, 5–6 mm. longae. *Folia* trifoliolatae, foliolis terminalibus ovate-triangularibus \pm 5 cm. longis, et 4–4.5 cm. latis, lateralibus inaequilateralibus, omnibus utrinque pubescentibus, subtus nerviis rufo-hirtis, petiolo communi rufo-hirsuto 25–30 mm. longo praedita. *Racemi* saepius 10–24-flori, laxi. *Flores* flavi 10–12 mm. longi. *Calyx* in toto, 8–9 mm. longus, glandulosus et hirsutus, dentibus infimis angustissimis et longioribus, dentibus supremis connatis. *Vexillum* obovatum, unguiculatum. *Alae* oblongae uno latere calcaratae. *Carina* naviculariformis. *Ovarium* pilis vestitans.

NATAL.—Oliver's Hoek Pass, *Wood* No. 3344. Alt. 4800 ft. In flower Jan., 1886.

An ally of *R. Pentheri*, Schlechter. The flowers are yellow, the calyx is hirsute and glandular, the lowest segment conspicuously longer than the rest and very narrow. The wing petals have a prominent tooth on one side.

Series 18.—*Flowers*, 10–12 mm. *Leaves* trifoliolate, *terminal leaflets* rhombéo-obovate. *Racemes* lax, many flowered.

31. *R. memnonia*, D.C., var. *prostrata*, Harvey, l.c. 253.

Stem flexuous, longitudinally striate, pubescent. *Stipules* lanceolate deciduous. *Leaves* trifoliolate, petiolate, terminal leaflets rhombéo-obovate generally, 10–12 mm. long and about the same breadth, terminal petiolules pubescent, 3–4 mm. long; lateral leaflets unequal-sided; common petiole 5–10 mm. long. *Racemes* longer than the leaves, lax, many-flowered. *Flowers* pendent. *Calyx* glandular, about 10 mm. long; segments longer than the tube, lanceolate. *Standard* pubescent on back, 10–11 mm. long; carina about 10 mm. long, boat-shaped. *Pod* 15–20 mm. long, pubescent.

TRANSVAAL.—Blomberg, *R. Schlechter* No. 4647; Magaliesberg, *Burke* No. 101; Shilouvane, *Junod* No. 768; Komatipoort, *R. Schlechter* No. 11750.

DELAGOA BAY.—*Bolus* No. 1143.

NATAL.—*Gerrard* No. 1949.

The plant described by Harvey as typical *R. memnonia* I have placed under *R. albissima*, Gandoger. It is in all parts tomentose-canescens or silky.

Series 19.—*Flowers*, 10–12 mm. *Leaflets* densely velvety, thick. *Peduncles* elongate, laxly several-flowered. *Standard* pubescent.

32. *R. crassifolia*, Benth. in Harvey, l.c.

R. longipes, Harms in Engler's "Jahrb.," XXVI, 306.

Stem procumbent. *Branches, petioles, etc.*, densely velvety. *Stipules* oblong obovate. *Leaves* trifoliolate, petiolate; terminal leaflets elliptic-ovate, subobtuse, softly velvety, 50–55 mm. long, 30–42 mm. broad; petioles 10–25 mm. long, hairy. *Peduncles* elongate, laxly several-flowered or sometimes many-flowered. *Calyx* silky, villous, 6–7 mm. long; segments longer than the tube, shorter than the standard. *Standard* pubescent, 8–10 mm. long; carina boat-shaped. *Pod* sessile, villous, 20–25 mm. long, 7–8 mm. broad.

TRANSVAAL.—Magaliesberg, *Burke and Zeyher*; between Kaap and Crocodile Rivers, *E. Galpin* No. 1067; Lydenberg, *Wilms* No. 395; near Pretoria, *McLea* No. 3153; Shanskop Fort, *Pole-Evans* No. 186; Cerro de Pasco, near Barberton, *E. Galpin* No. 1067.

Easily recognized by the thick velvety leaves, the elongate lax-flowered peduncle, the hairy standard, and the villous pod.

Series 20.—*Flowers 10–12 mm. long in lax racemes much longer than the leaves. Terminal leaflets suborbicular, obtuse. Standard glabrous.*

33. **R. Pentheri**, Schlechter, *ex A. Zahlb* in “*Ann. Nat. Hofmus. Wien.*,” XX (1905), 26.

Decumbent branches filiform, elongate, voluble, subvillose, puberulous. *Stipules* minute, obliquely lanceolate, acuminate. *Leaves* trifoliolate; terminal leaflets rhomboid-orbicular or orbicular, obtuse, 15–25 mm. long, 12–25 mm. broad; common petiole about 5 mm. long in type, villose-puberulous. *Racemes* elongate, much exceeding the leaves, laxly several or many flowered, longly peduncled. *Calyx* campanulate, about 7 mm. long, somewhat glandular; segments subulate. *Standard* obovoid, base auriculate, about 11 mm. long; wings oblong; carina boat-shaped, obtuse. *Ovary* pilose; style filiform, glabrous. *Pod* not seen.

CAPE.—Albany Division, *Dr. Atherstone*.

EAST GRIQUALAND.—Near Newmarket, *Krook* No. 2631; near Currie's Post, *Schlechter* No. 6087.

NATAL.—Van Reenens Pass, *Krook* No. 2523; near Charlestown, *Wood* No. 5707, *Gerrard* No. 1736.

BASUTOLAND.—Leribe, *Dieterlen* No. 112. KAFFRARIA, *Baur*.

Var. **Hutchinsoniana**, Burt-Davy and Bak. fil. in “*Kew Bull.*,” 1921, 193.

Prostrate herb. Stems hirsute. *Leaves* sessile or subsessile; terminal leaflets suborbicular, obtuse, 30–34 mm. long, 30–33 mm. broad. *Racemes* reaching 15–21 cm. long, laxly-flowered. *Flowers* about 1 cm. long. *Calyx* hirsute, more or less glandular; lobes acuminate. *Corolla* apex purplish; standard yellow, with purple lines. *Pod* not seen.

NATAL.—Karkloof, *J. Wylie* in *Herb. Wood* No. 7212; Edendale, *Wood* No. 4601; Van Reenen, *Wood* No. 6674; near Northdene, *Wood* No. 3180.

EAST GRIQUALAND.—Near Clydesdale, *Tyson* No. 2068.

TRANSVAAL.—Johannesburg, *Gilfillan* No. 211.

Series 21.—*Leaflets ovate-orbicular or subrhomboid, below densely gland-dotted. Flowers 10–12 mm. long, in racemes longer than the leaves. In var. Cooperi, Harvey, flowers larger.*

34. **R. adenodes**, Ecklon and Zeyher, “*Enum.*,” 254; Harvey, *l.c.* ii, 254.

R. amatymbica, Ecklon and Zeyher No. 1671; *Copisma effusum*, E. Mey., “*Comm.*,” 135.

Prostrate, subglabrous or minutely puberulous. *Stipules* lanceolate. *Leaves* trifoliolate, petiolate; terminal leaflets ovate-orbicular or subrhomboid, acute or obtuse, resinous-dotted, generally 7–25 mm. long, 10–25 mm. broad; terminal petiolule 2–3 mm. long; lateral leaflets unequalsided; common petiole 10–24 mm. long. *Peduncles* longer than the leaves, shortly and closely racemose near the summit. *Calyx* pubescent, its segments lanceolate, longer than the tube. *Standard* glabrous or puberulent, glandular, longer than the calyx. *Pod* hairy, 15–18 mm. long.

CAPE.—Somerset East Division, Boschberg, *Bolus* No. 322; East London, *E. Galpin* No. 7338; Aliwal North, *Bolus* No. 10472; Queenstown Dist., *Mrs. Barber*, *E. Galpin* No. 1595; Komgha, *Flanagan* No. 764; near Philipstown, *Ecklon* No. 1670.

ZULULAND.—*Mckenzie*. TEMBUKILAND.—*Ecklon* No. 1671.

NATAL.—*Krauss* No. 301; Drakensberg, *Rehmann* No. 7067; Inanda, *Wood* Nos. 244, 419, 297; between Greytown and Newcastle, *Wilms* No. 1950.

EAST GRIQUALAND.—Near Clydesdale, *Tyson* No. 1447–1055; Umzunwubu Flats, *Tyson* No. 1132.

KAFFRARIA.—*T. Cooper* No. 155; *Baur* Nos. 24, 125, 761.

TRANSVAAL.—Pretoria, *Rehmann* No. 4648; Lydenberg, *Wilms* Nos. 281, 282; Fairy Glen, *Leendertz* No. 318; Wakkerstroom, *Beeton* No. 12393; Heidelberg, *Gilfillan* No. 76; Vereeniging, *Gilfillan* No. 142; Standerton, *Burtt-Davy* No. 2323.

Var. *laxiflora*, *Burtt-Davy* in *Herb.*, *Kew.*

Pedunculi elongati, laxiflori. *Flores* parviusculi, 7–8 mm. longi.

NATAL.—Pietermaritzburg, *Dr. Sutherland*, *Herb.*, *Kew.*

The leaflets are rhombic-ovate pointed, 10–17 mm. long, 9–13 mm. broad.

Var. *Cooperi* (*R. Cooperi*, *Harvey*, ms.)

Foliola majora late ovata vel suborbicularia. *Pedunculi* longi. *Flores* majores: 14–18 mm. longi.

EAST GRIQUALAND.—Near Fort Donald, *Tyson* No. 1637; Clydesdale, *Tyson* No. 2065.

ORANGE FREE STATE.—*T. Cooper* No. 1012.

NATAL.—Gillit's, *Wood* No. 11503; Lynedoch, *Wood* No. 4538; Nottingham Road, *Wood* No. 6042. KREILS COUNTRY.—*Bowker*.

This is a climbing plant with orange-coloured flowers.

Series 22.—*Flowers*, 12–15 mm. *Leaves* trifoliolate, leaflets large, softly villous. *Peduncles* elongate, densely racemose beyond the middle.

35. **R. sigmodes**, *Benth.*, *ex Harvey*, l.c. ii. 251.

Sigmodostyles villosa, *Benth.* in *Hook*, "Lond. Journ.," II, 93.

Stem robust, prostrate, softly villous. *Stipules* broadly triangular. *Leaves* trifoliolate, subsessile or shortly petiolate; terminal leaflets cordate-ovate or suborbicular, rugose, thick, velvety, 7–11 cm. long, 6–12 cm. broad. *Peduncles* elongate, densely racemose beyond the middle. *Calyx* 7–9 mm. long, villous, its segments longer than the tube. *Standard* glabrous, 12–13 mm. long; keel 13–14 mm. long. *Pod* falcate, hairy, 20–28 mm. long, sessile, obtuse.

NATAL.—Near Pietermaritzburg, *Krauss*; near Howick, *Wood* Nos. 8384 and 8665; Inanda, *Wood* No. 1059; near Pinetown, *Wood* No. 3406.

EAST GRIQUALAND.—Zuurberg, *Tyson* No. 1581.

TRANSVAAL.—*Wilms* No. 387 (forma).

Wilms No. 387, issued with a ms. name, seems a form of this species, with more angled leaves than usual.

Series 23.—*Leaflets* glandular. *Racemes* dense, many-flowered. *Flowers* about 15 mm. long. *Standard* glandular.

26. **R. chrysantha**, *Schlechter*, *ex A. Zahlb.* in "Ann. Nat. Hofmus. Wien.," XX (1905), 27.

Decumbent at length, voluble; branches filiform, more or less compressed, angular, puberulous. *Stipules* lanceolate, acuminate. *Leaves* trifoliolate, petiolate; terminal leaflets ovate-suborbicular, 18–30 mm. long, 15–30 mm. broad, below glandular; common petiole 20–35 mm. long. *Racemes* longly peduncled, densely many-flowered (15–25), much exceeding the leaves. *Calyx* campanulate, about 10 mm. long, glandular; segments linear-lanceolate. *Standard* obovoid, about 13 mm. long; wings obliquely subfalcate-spathulate; carina boat-shaped. *Ovary* pilose; style filiform, glabrous. *Pod* not seen.

NATAL.—Ixopo, *Krook* No. 2547, *Schlechter* No. 6641; District Alexandria, *Wilms* No. 1305.

Easily recognized by its dense raceme, glandular leaves, and glandular standard.

D.—STEM VOLUBLE. LEAVES NARROWER.

Series 24.—Leaves trifoliolate, leaflets elliptic-oblong or oblong. Peduncles 1-2-flowered, shorter than leaves.

37. **R. puberula**, Harvey, l.c. 255.

Copisma tottum, E. Mey., "Comm.," 133; *Eriosema puberulum*, Ecklon and Zeyher, 1677; *Hedysarum ciliatum*, Thunbg. "Fl. Cap.," 594; *Desmodium? ciliatum*, D.C., "Prod.," II, 333.

Root woody. Stems several, spreading, prostrate or subvoluble. *Stipules* lanceolate. *Leaves* trifoliolate, very shortly petiolate; leaflets elliptic-oblong or oblong-rigid; terminal leaflets 24-30 mm. long, 8-16 mm. broad. *Peduncles* 1-2-flowered, shorter than the leaves. *Flowers* 10-13 mm. long. *Calyx* villous, 6-7 mm. long, its segments longer than the tube, shorter than the petals. *Standard* glabrous, longer than the calyx, 10-12 mm. long; carina shorter than the standard. *Pod* sessile, very villous, 12-16 mm. long seeds.

CAPE.—Galgebosch, *Thunberg*; Albany Division, *Bowie*, *Burchell* Nos. 3498 and 4189; Viseh River, *Hutton*; near Grahamstown, *P. MacOwan* No. 473; Mossel Bay Division, *Burchell* No. 6210; Uitenhage, *Ecklon* No. 1577; Riversdale Division, near Spiegel River, *Burchell* No. 7206; Kingwilliamstown Division, *Tyson* No. 853. NATAL.—Camperdown, *Miss Franks* No. 12528. BRITISH KAFFRARIA.—*T. Cooper* No. 539. TRANSVAAL.—Magaliesberg, *Burke*.

Easily recognized by the several spreading subvoluble stems, the trifoliolate leaves with rigid elliptic-oblong or oblong leaflets, and the few-flowered inflorescence shorter than the leaves.

Series 25.—Leaves usually trifoliolate, rarely unifoliolate; leaflets ovate, or oblong or lanceolate, petiolate. Peduncles 1-3-flowered.

38. **R. Totta**, D.C., "Prod.," II, 388; Harvey, l.c. ii, 255.

Glycine Totta, *Thunberg*, "Flora Cap.," 591.

Procumbent or subvoluble. *Stem* filiform, hispid-pubescent or glabrate. *Stipules* small, ovate-lanceolate, rigid. *Leaves* in typical form, trifoliolate, petiolate; leaflets in typical form, ovate or ovate-oblong, reticulate, terminal leaflets 10-25 mm. long, 5-12 mm. broad; common petioles 5-15 mm. long; lateral leaflets somewhat unequalsided. *Peduncles* filiform, equalling the petioles or longer, 1-3-flowered. *Calyx segments* longer than the tube, but shorter than the standard. *Standard* glabrous, 6-9 mm. long. *Pod* oblong, sessile, pilose, pubescent.

CAPE.—Galgebosch, *Thunberg*, type; Grahamstown, *MacOwan* No. 462; Humansdorp Division, *Burchell* No. 4824, *Burt-Davy* No. 12088.

BECHUANALAND.—*Burchell* Nos. 2433, 2487, 2569.

NATAL.—Ladysmith, *Wood* No. 8254; Phoenix, *Schlechter* No. 3027.

The type of *R. Totta* in *Thunberg's Herbarium* has ovate or ovate-oblong leaves. *Copisma paniculatum*, E. Mey., from Magaliesberg in the Transvaal, and Katrivierspoort, has longer and narrower leaflets, but is not specifically distinct.

Var. **Fenchelii**, Schinz in "Vierteljahrschrift Nat. Ges. Zurich," LIII, 426 (1907).

Stem grey puberulous. *Leaves* trifoliolate.

GREAT NAMAQUALAND.—Keetmanshoop, *Fenchel* No. 195.

Var. **namaensis**, Schinz. in Herb.

Leaves trifoliolate, leaflets lanceolate or ovate-lanceolate, grey puberulous.

GREAT NAMAQUALAND.—Seeheim, alt. 4000 ft., *Pearson* No. 3741; Keetmanshoop, *Fenchel*. Intermediate between *R. Totta*, D.C., and *R. longiflora*, Schinz.

Var. **pilosa**, Harvey, L.c. ii, 256, pro species.

Copisma pilosum, E. Mey., "Comm.," 133.

Stem patently pilose. *Leaves* trifoliolate, leaflets of lower leaves ovate-oblong of the upper linear.

PORT NATAL—*Gueinzius*; Zuurberg and between the Omtendo and Omsamculo, Drège.

This is hardly specifically distinct from *R. Totta*, D.C.

Var. **unifoliolata**, Burt-Davy, in "Kew Bull.," 1921, 49, pro species.

Leaves unifoliolate or trifoliolate, leaflets ovate, common petiole short, 1–2 mm. *Flowers* 7–8 mm. long.

TRANSVAAL.—Ermelo, *Burt-Davy* No. 17403. HOOGEVELD.—*Rehmann* No. 6836.

Var. **brevipetiolata**, Bak. fil.

Caules flexuosi, pilosi vel tomentosi. *Stipulae* lanceolatae, striatae. *Folia* trifoliolata, anguste oblonga vel elliptica, foliolis terminalibus 15–23 mm. longis, 5–12 mm. latis, apice acutis, petiolo communi brevi, 2–4 mm. longo suffulta. *Flores* 8 mm. longi, pedunculati, saepissime solitarii rarius bini. *Calyx* 6–7 mm. longus, pilosus. *Legumen* 10–15 mm. longum, pilosum.

TRANSVAAL.—Johannesburg, Jeppestown Ridge, *Gilfillan* Nos. 22 and 65; Nat. Herb., Pretoria, Nos. 6103 and 6104.

Ally of *R. Totta*, D.C., var. *pilosa*, Harvey. The noticeable features are the pilose or tomentose stems, the short petioles. It was distributed as *R. puberula*, Harvey.

Var. **graciliflora** (*R. graciliflora* Harms) in Herb. Mus. Brit.

Stems flexuous, filiform, pubescent or nearly glabrous. *Stipules* lanceolate, longitudinally striate, 4–5 mm. long. *Leaves* trifoliolate, petiolate; terminal leaflets linear-lanceolate, glabrous above with a few scattered hairs below, 3–4.5 cm. long, 3–5 mm. broad; terminal petiolules 4 mm. long; lateral leaflets slightly unequal-sided at base; common petioles 15–25 mm. long. *Peduncles* slender, generally one-flowered. *Calyx* hairy; segments lanceolate, longer than the tube, but shorter than the corolla. *Standard* glabrous, 7–9 mm. long. *Pod* about 16 mm. long, hairy outside, seeds reddish brown.

CAPE.—Queenstown, *E. Galpin* No. 1547. NATAL.—Mooi River, *J. Webb* No. 7011. EAST GRIQUALAND.—Kokstad, *Tyson* No. 1336. BASUTOLAND.—Leribe, *Mrs. Dieterlen* No. 6839. ORANGE FREE STATE.—Bethlehem, *T. Potgieter* No. 59.

TRANSVAAL.—Lydenberg, *Wilms* No. 367; Modderfontein, *Conrath* No. 259; near Pretoria, *Bolus* No. 7750; Ermelo, *G. McCall* No. 7592; Davel, *W. J. Wayland*, sine no.; near Pretoria, *Pole-Evans* No. 51.

A plant from Camperdown, *Franks* (Com. *Medley Wood* No. 11826), is a form of this species.

Differs from the type of *R. Totta* in Thunberg's Herbarium by the linear lanceolate leaves.

39. **R. longiflora**, Schinz in "Bot. Verh. Brand.," XXX, 168 (1889).

Stems slender, voluble, pilose. *Leaves* trifoliolate, petiolate; terminal leaflets narrow, lanceolate, acute, mucronate, 13–30 mm. long, 2.5–5 mm. broad; terminal petiolules 2 mm.; lateral leaflets unequal-sided; common petiole reaching 8 mm. long. *Peduncles* axillary, two-flowered. *Calyx* bilabiate; segments as long as or a little longer than the tube. *Standard* glabrous, 22 mm. long; keel about the same length; wings shorter, about 13 mm. long. *Pod* pilose, sessile, about 23 mm. long and 7 mm. broad.

GREAT NAMAQUALAND.—Osis.

Noticeable on account of the narrow lanceolate terminal leaflets and two-flowered racemes.

R. amboense, Schinz., is allied, but the flowers are smaller.

R. Totta, D.C., var. *nanaensis*, Schinz., seems intermediate between *R. Totta* and the present species. Flowers longer than in *R. Totta*, D.C.

Series 26.—*Leaflets lanceolate or oblong-lanceolate, when young sericeous. Flowers 8–10 mm. long, in a very lax raceme.*

40. *R. elegantissima*, Schinz. in "Vierteljahrsschrift Nat. Ges. Zurich." LII, 428 (1907).

R. sericea, Conrath in Herb. Kew.

Suffrutex with flexuous, filiform branches. *Stipules* longitudinally striate. *Leaves* trifoliolate, petiolate; terminal leaflets lanceolate, 2–4 cm. long and 8–12 mm. broad; terminal petioles 2–3 mm. long; lateral leaflets slightly unequal-sided; common petiole 8–15 mm. long. *Racemes* few-flowered, very lax. *Flowers* 8–10 mm. long. *Calyx* segments acuminate, shorter than the standard. *Standard* 7–9 mm. long. *Pod* 15–17 mm. long, pubescent, seeds dark coloured.

TRANSVAAL.—*Rehman* No. 5545; near Pretoria. *Conrath* No. 258; Onderstepoort, A. O. D. *Mogg* No. 15674.

A suffrutex with flexuous branches. The young foliage is silvery, the leaflets are lanceolate.

Series 27. *Leaflets oblong-ovate or ovate-lanceolate, tomentose. Flowers 10–12 mm. long, in very lax few-flowered racemes. Stems rufo-tomentose.*

41. *R. venulosus*, K. Schum. in "Just Jahrb.," XXVII, 496.

Dolicholus venulosus, Hiern. in "Cat. Welw. Afr. Pl.," I, 271; *R. cinnamomea*, Schinz. in "Vierteljahrsschrift Nat. Ges. Zurich." LII, 429 (1907); *R. remota*, Conrath in "Kew Bull." (1908), 224.

Stem terete, densely rufo-tomentose, scandent. *Stipules* small. *Leaves* trifoliolate, oblong, ovate or ovate-lanceolate tomentose; terminal leaflets 20–35 mm. long, 10–14 mm. broad; lateral leaflets base more or less oblique; common petioles 10–15 mm. long. *Racemes* axillary, very lax, 2–5-flowered; pedicels densely pubescent, 2–3 mm. long. *Calyx* 7 mm. long; segments acuminate, longer than the tube. *Standard* 8–11 mm. long. *Pod* oblong, pilose, about 2 cm. long.

TRANSVAAL.—Magaliesberg. *B. Schlechter* No. 4162; Witpoortje, near Johannesburg, *Conrath* No. 262; Mooi River. *Burke*; Rustenburg. *Olive Nation* No. 157.

BECHUANALAND.—Kuruman Hills, *Burchell* No. 2172.

Easily recognized by the terete, scandent, cinnamon-coloured, hirsute or tomentose stem, and very lax 2–5-flowered racemes.

Zeyher No. 515 is this species.

Series 28.—*Leaves trifoliolate, leaflets oblong or oblong-lanceolate, or ovate. Peduncles slender, longer than the leaves, 1–6-flowered at the summit. Pod stipitate.*

42. *R. glandulosa*, D.C., "Prod.," II, 388; Harvey, l.c. 256.

Glycine glandulosa, Thunberg, "Cap.," 591; *Glycine heterophylla*, Thunberg, "Cap.," 592; *Copisma glandulosum*, E. Mey., "Comm.," 133; *Rhynchosia glandulosa, riparia, glabra*, Ecklon and Zeyher; *Glycine glabra*, Spreng; New Entdack, iii, 54. *Rhynchosia glabra*, D.C., "Prod.," II, 387; *Copisma glabrum*, E. Mey., "Comm.," 134.

Prostrate or voluble, glabrous or downy. Stipules ovate or sub-lanceolate. *Leaves* trifoliolate, petiolate; leaflets oblong or oblong-lanceolate, or ovate; terminal leaflets 10–30 mm. long, 3–10 mm. broad, resinous-dotted and paler beneath. *Peduncles* slender,

longer than the leaves, 1-6-flowered at the summit. *Calyx* tube shorter than the lanceolate segments. *Standard* glabrous. *Pod* stipulate, glabrous or downy, 16-18 mm. long, tapering at base into a stipe 2-4 mm. long.

CAPE.—Common on stony hills from Capetown to Uitenhage and Albany.

Series 29.—*Leaflets linear, below resinous-punctate. Pedicels axillary one-flowered.*

43. **R. rigidula**, D.C., "Prod." II, 388.

Stem erect, retrorsely cano-pubescent. *Leaflets* linear, mucronate, pubescent, below resinous-punctate. *Pedicels* axillary, one-flowered, at the middle inflexed, then deflexed, the length of the petiole. *Pod* subvillose, one-seeded, oblong.

CAPE.—*Burchell* No. 2587.

This is only known to me from De Candolle's description, of which the above is a translation. I think there is some error in the number, as this number belongs to a plant of another family.

E.—STEMS RIGID OR SUBRIGID, USUALLY ERECT.

Series 30.—*Leaves trifoliolate, subsessile or shortly petiolate, terminal leaflets elliptic-oblong or lanceolate-oblong. Peduncles shorter than the leaves, closely few-flowered in var. densiflora. mostly terminal and more densely flowered.*

44. **R. Orthodanum**, Benth., *ex* Harvey, l.c. 257; Wood, "Natal Plants," t. 220.

Orthodanum latifolium, sordidum, and argenteum. E. Mey., "Comm.," 131-2; *Eriosema sericeum*, Ecklon and Zeyher, "Enum.," 256.

Erect suffruticose, silky-villous or glabrescent. *Stipules* lanceolate. *Leaves* trifoliolate, subsessile, or shortly petiolate; leaflets elliptic-oblong or lanceolate-oblong, or oblanceolate, 20-60 mm. long, 5-20 mm. broad. *Peduncles* shorter than the leaves, closely few-flowered. *Calyx* 8-10 mm. long; lobes lanceolate-acuminate, much longer than the tube, either shorter or longer than the standard. *Standard* glabrous, suborbicular-obovate; keel boat-shaped. *Pod* 12-16 mm. long, silky, sometimes glabrescent.

CAPE.—Wimberberg, above Philipstown, Kat River. *Ecklon and Zeyher*; Kentani, *Miss Pegler*.

NATAL.—Port Natal, *Drège, Krauss* No. 374; in open ground all over the Colony, *vide Wood*.

BRITISH KAFFRARIA.—*T. Cooper* No. 294.

TRANSVAAL.—Near Crocodile River, *R. Schlechter* No. 3921; Johannesburg, *Dr. Rand* No. 951.

Var. **Muhlenbeckii**, Harvey, l.c. 257.

Orthodanum Muhlenbeckii and *O. glabratum*, Meisner in Hook, "Lond. Journ.," II, 91-2.

Stems dwarf. *Leaves* and *flowers* smaller, terminal; leaflets generally 10-15 mm. long, 3-7 mm. broad.

CAPE.—Near Kromme River, Uitenhage; Albany Division; Uitenhage. *Bowie*; Queenstown. *E. Galpin* No. 1958.

Var. nov. **densiflora**.

Pedunculi saspissine terminale copiose floriferi.

NATAL.—District Alexandra, *H. Ridatis* No. 1349.

This species is variable in size and shape of leaflets. It occurs as far north as Gazaland, where it was collected near Chipete by *C. F. M. Swynnerton*.

Series 31.—*Terminal leaflets broad, cinereous-tomentose, Racemes few-flowered. Flowers 16-17 mm. long.*

45. **R. spectabilis**, Schinz in "Vierteljahrschrift Nat. Ges. Zurich," LV, 236 (1910).

Fruticose, stems canotomentose. *Stipules* small, hairy. *Leaves* trifoliolate, petiolate; terminal leaflets broadly ovate or suborbicular ovate, base cordate or subcordate, 3-5 cm. long, 3-5.5 cm. broad; terminal petiolules 8-10 mm. long; lateral leaflets unequal-sided, all markedly reticulate and canotomentose below. *Racemes* few-flowered, shorter than the leaves. *Calyx* canotomentose externally, about 11 mm. long; lobes lanceolate. *Standard* covered with white hairs externally; keel about as long as the standard. *Pod* 20-25 mm. long, apiculate, hairy.

TRANSVAAL.—Moord Drift, *R. Schlechter* No. 4310, *Leendertz* No. 2228.

A canotomentose shrub with few-flowered racemes, and flowers 16-17 mm. long.

Series 32.—*Leaves* shortly petiolate, terminal leaflet oval or suborbicular. *Raceme* shorter than the leaves, few-flowered. *Stem* terete.

46. **R. Rudolfi**, Harms, in "Notizblatt. Bot. Gard.," Berlin, B.Ld. VIII, 156 (1922).

Species ad *R. ambacensem*, K. Schum (*Dolicholum ambacensem*, Hiern) affinis. *Caulis* rigidus, erectus, ferrugineo-tomentosus. *Stipulae* ferrugineo-tomentosae mox delapsae. *Folia* trifoliolata, foliolis terminalibus ovalibus vel ovali-suborbicularibus utrinque tomentosus, 4-4.5 cm. longis, 25-33 mm. latis, foliolis lateralibus saepius minoribus, 3-3.5 cm. longis, 15-30 mm. latis, petiolo communi ferrugineo-tomentoso 5-10 mm. longo suffulta petiolulis foliorum terminalium 6-8 mm. longis etiam ferrugineo-tomentosis. *Racemi* foliis breviores saepius 2-3-flori, rhachi ferrugineo-tomentosa. *Calycis* *tubus* brevis extus ferrugineo-tomentosus, lobis angustis lineari-lanceolatis tubo multoties longioribus. *Petala* delapsa. *Ovarium* pilis albidis dense villosum.

TRANSVAAL.—Near Crocodile River, alt. 1600 m., *R. Schlechter* No. 3910, Herb. Zurich.

This is an erect plant, the stem being ferrugineo-tomentose. The leaves are trifoliolate, the terminal leaflets are longer than they are broad. The racemes are 2-3-flowered. Calyx 13-14 mm. long, of which the tube is only 4 mm. It differs from *R. ambacensis*, K Schum, by the shape of the terminal leaflets and the tomentum. It is also allied to *R. spectabilis*, Schinz.

Series 33.—*Leaflets* ovate or orbicular-ovate. *Peduncles* axillary, two-flowered. *Flowers* 18-20 mm. long.

47. **R. komatiensis**, Harms in Engler's "Jahrb.," XXVI, 306.

Fruticose erect, branches pubescent. *Leaves* trifoliolate, shortly petiolate; terminal leaflets ovate or orbicular-ovate, 15-27 mm. long, 12-20 mm. broad; lateral leaflets unequal-sided; common petiole 5-10 mm. long, tomentose. *Peduncles* axillary, short, about two-flowered; pedicels equalling calyx or shorter. *Calyx* obliquely campanulate; teeth ovate; lowest longest. *Corolla* about 18 mm. long, about three times the length of the calyx; standard pilose externally. *Ovary* and young pod densely hirsute.

TRANSVAAL.—Between Spitzkop and the Komati River, *Wilms* No. 374; *Shilovane*, *Junod* No. 541.

A shrub with ovate or ovate-orbicular leaflets and two-flowered peduncles. The corolla is about three times the length of the calyx, which is an interesting feature of this species.

Section 34.—*Leaves* petiolate, terminal leaflet ovate-lanceolate. *Racemes* shorter than the leaves. *Flowers* large. *Standard* 15-18 mm. long in type. *Upper calycine lobes* shorter than lowest lobe.

48. **R. clivorum**, S. Moore in "Journ. Bot.," XVI, 131 (1878).

Suffruticose erect. *Stipules* rather large, oblong-acuminate. *Leaves* trifoliolate, petiolate; terminal leaflet ovate-lanceolate, below conspicuously nerved, 5-6 cm. long, 18-25 mm. broad; lateral leaflets unequal-sided. *Racemes* shorter than the leaves, few-flowered.

Flowers yellow, perfumed. *Calyx* lobes oblong, acute, unequal; lower longer, slightly longer, than the keel; upper somewhat broader; tube about 5 mm. long; lowest lobe 11–12 mm. long. *Standard* 15–18 mm. long, ovate, about as long as the carina; carina boat-shaped, obtuse, base longly unguiculate. *Pod* about 15 mm. long, seeds subreniform.

TRANSVAAL.—Near Pilgrims Rest, *J. McLea* No. 3033; Ivy Range, alt. 5000 ft., *Thorncroft* No. 342.

Var. nov. **longicalycina**.

Folia trifoliolata, foliolis ovato-lanceolatis. *Calycis lobis* inferioribus, 20–22 mm. longisquam reliquis et carinam longioribus, calyx in toto 26–28 mm. longus.

TRANSVAAL.—Pietersburg, *Isobel MacCallum* No. 1415, Herb. Kew.

This variety differs in having a longer calyx and rather longer leaflets.

This species is a small shrub and is easily recognized by the erect habit, large flowers, and ovate-lanceolate leaflets.

R. pycnantha, Harms, is doubtfully distinct.

Series 35.—*Silky-silvery plants. Leaves trifoliolate. Raceme few-flowered, generally shorter than leaves, rarely longer. Flowers 16–23 mm. long. Standard pubescent.*

(a) *Leaflets broadly ovate or cordate-ovate.*

49. **R. nitens**, Benth., in Harvey, l.c. 257.

Erect suffruticose, everywhere silky-silvery. *Stem* terete or subterete. *Stipules* obsolete. *Leaves* trifoliolate, petiolate; terminal leaflets broadly ovate or cordate-ovate; lateral leaflets unequalsided; common petiole, 6–12 mm. *Racemes* 2–3-flowered, shorter than the leaf. *Flowers* 16–18 mm. long, yellow. *Calyx* much shorter than the petals, 7–8 mm. long, lobes shorter than the tube. *Standard* pubescent, 16–18 mm. long, about twice as long as the calyx; carina boat-shaped, a little shorter than the standard. *Pod* densely pilose, 3 cm. long.

TRANSVAAL.—Magaliesberg, *Burke and Zeyher*; Waterkloof, Pretoria, *I. C. Verdoorn* No. 40; Meintjes Kop, *Pole-Evans* No. 356.

This is an erect suffrutex with silky-silvery foliage and yellow flowers. The standard is pubescent and about twice as long as the calyx.

(b) *Leaflets longer, oblong-obovate. Flowers larger.*

50. **R. Galpini**, sp. nov.

Suffrutex erectus, caulibus juvenilibus tomentosus. *Folia* trifoliolata, praecipue subtus argenteo-sericea, foliolis terminalibus oblongo-obovatis, 4–5 cm. longis, 2–2.5 cm. latis, foliolis lateralibus inaequalateralibus, angustioribus 3.5–4 cm. longis, 12–15 mm. latis, petiole communi 3–6 mm. longo praedita. *Racemi* pluriflori. *Flores* majusculi, 20–23 mm. longi. *Vexillum* extus pilis vestitum calyce distincte longius. *Calyx* extus pubescens, in toto 10 mm. longus, dentibus lanceolatis 5 mm. longis tubo subaequilongis. *Ovarium* pilis flavidis vestitum. *Legumen* ignotum.

TRANSVAAL.—Barberton, mountain sides, Musidora, *E. E. Galpin* No. 442. Differs from *R. nitens* in the much longer and differently shaped leaflets.

Series 36.—*Leaves petiolate, terminal leaflets rhomboid-ovate, softly pubescent below. Flowers pedicellate. Standard 18 mm. long.*

51. **R. Bakeri**, Schinz in "Bull. Herb. Boiss," Ser. II (1908), 628.

Fruticose probably erect, branches pilose. *Stipules* not seen. *Leaves* petiolate trifoliolate, terminal leaflets rhomboid-ovate or suborbicular-ovate, coriaceous apex shortly acuminate, about 6 cm. long and 5 cm. broad; lateral leaflets unequalsided; common petiole 25 mm. long. *Inflorescence* racemose. *Calyx* hirsute, the lowest segment being longer than the rest. *Standard* glandular externally, about 18 mm. long and 12 mm. broad; wings about 3 mm. broad; carina 15 mm. long, blunt and somewhat longer than the wings. *Ovary* and young pods densely hirsute.

TRANSVAAL.—Terminus of Selati Railway. *Junod* No. 1585.

A shrub with trifoliolate leaves and rhomboid-ovate leaflets. The calyx is glandular, also the standard.

Series 37.—*Leaves viscidly hairy and resin-dotted, small, oblong, bullate. Peduncles short, 1-2-flowered.*

52. **R. bullata**. Benth., *ex* Harvey and Sonder, l.c. ii. 257.

Hydrosia bullata, E. Mey., "Comm.," 89; *R. uncinata*, Schlechter in Herb. Mus. Brit. *Shrubby* erect, branched, viscidly hairy, and resin-dotted. *Stipules* ovate-acuminate, longer than the petiole. *Leaves* trifoliolate, on very short petioles; leaflets oblong, small, bullate, with recurved margins; terminal leaflets 5-8 mm. long, 2-3.5 mm. broad. *Peduncles* scarcely longer than the leaves, 1-2-flowered. *Calyx* glandular; lobes scarcely longer than the tube. *Standard* glabrous, 12-15 mm. long, with a longish claw; carina equalling the vexillum. *Pod* 10-12 mm. long, oblong, compressed, sparsely pilose.

CAPE.—Clanwillian Div., Wupperthal. *Drège*, *Bolus* No. 8990; Paekhuis Berg, *R. Schlechter* No. 8661.

A very distinct species, being an erect, viscidly hairy little shrub. The peduncles are short and 1-2-flowered.

Series 38.—*Terminal leaflets elliptical. Racemes rather longly peduncled. Stems distinctly angled.*

53. **R. angulosa**, Schinz in "Bull. Herb. Boiss.," Ser. II (1908), 628.

Rootstock woody, branches somewhat flexuous, angled, canopilose. *Stipules* lanceolate. *Leaves* trifoliolate, very shortly petiolate; terminal leaflets elliptical hairy on the back, 3-4.5 cm. long, 10-20 mm. broad; lateral leaflets somewhat smaller; common petiole canopilose 2-4 mm. long. *Racemes* axillary, longly peduncled, about as long as leaves or slightly shorter. *Calyx* pilose with long hairs; tube 3 mm. long; the lowest segment is about 9 mm. long, and is longer than the upper segments. *Standard* glabrous, 13-15 mm. long, 10 mm. broad; carina blunt; wings narrow. *Pod* 20-23 mm. long and about 7 mm. broad.

TRANSVAAL.—Mountain sides, Barberton. *E. Galpin* No. 1095, alt. 4500-5000 ft.; Messina, near Barberton. *Galpin* No. 507.

This is a dwarf shrub with angular stems, trifoliolate very shortly petiolate leaves, and a raceme of 3-8 orange-coloured flowers, the standard being streaked and reddish.

Series 39. *Terminal leaflet obovate, base emarginate. Racemes longer than the leaves, many-flowered.*

54. **R. Woodii**, Schinz in "Bull. Herb. Boiss." (1894), 197, tab. iii, figs. A-F.

Stem erect, cano-pubescent, longitudinally striate. *Stipules* lanceolate, subacuminate, *Leaves* trifoliolate, subsessile or petiole very short, terminal leaflets obovate or oblong-obovate; lateral leaflets unequal-sided. *Racemes* longer than the leaves, many-flowered. *Peduncles* canescent-tomentose. *Flowers* yellow, the standard being striate with brown lines. *Calyx* hairy, segments lanceolate, two uppermost connate, 6-7 mm. long, distinctly shorter than the petals. *Standard* obovate glabrous, 10-12 mm. long; wings spurred unguiculate; carina boat-shaped, apex obtuse, base unguiculate. *Pod* 18-20 mm. long, glabrous, pointed, seeds black, reniform, 6 mm. long.

NATAL.—Inanda, *Wood* No. 1884, *Rehmann* No. 8411, *Wood* No. 6627.

An easily recognized shrub with obovate terminal leaflets, racemes longer than the leaves, and yellow flowers, the standard being striate with brown lines.

Series 40.—*Leaves silky-silvery or cinereous pubescent. Flowers 8-12 mm. long, in long racemes longer than the leaves.*

55. *R. albissima*, Gandoger in "Bull. Soc. Bot., France," LX, 461, 1913.

R. memnonia, Harvey pro-parte; Wood, "Natal Plants," t. 349.

Caulis rigidus, cano-tomentosus, longitudinaliter striatus. *Stipulae* lanceolatae, caducae. *Folia* trifoliolata petiolata, foliolis terminalibus rhombeo-obovatis, 2-3 cm. longis, 2-2.5 cm. latis, petiolulis terminalibus 6-8 mm. longis, foliolis lateralibus inaequilateralibus, petiolo communi saepissime, 15-20 mm. longis. *Racemi* axillares, folio longiores, multiflori. *Flores* penduli, 8-12 mm. longi. *Calyx* canescenti-tomentosus, 6-7 mm. longus, segmentis acuminatis. *Vexillum* extus pilis vestitum. *Carina* vexillo subaequilonga. *Legumen* canescenti-tomentosum. 12-15 mm. longum.

TRANSVAAL.—Magaliesberg, *Burke*; near Aapies River, *Schlechter* No. 3619; Gezina, near Pretoria, *A. O. D. Mogg* No. 10082; above Aapies River, *Rehmann* No. 4374; Hartebeestpoort, *Miss Findlay* No. 21.

ZULULAND.—Ntondweni, *J. Wylie* (Wood No. 9197); Umsundusi, *Wood* No. 3954.

Easily recognized by the whole plant being tomentose-canescens; the stems are rigid, the terminal leaflets rhombeo-obovate, the racemes longer than the leaves, many-flowered; the flowers are yellow.

This is not *R. memnonia*, D.C.

Between Lourenco Marques and Komatipoort, *Bolus* No. 7751.

56. *R. Pegleri*, sp. nov.

Caulis strictus, virgatus, pubescens, longitudinaliter striatus. *Stipulae* angustae lineari-lanceolatae. *Folia* trifoliolata, foliolis terminalibus rhombeo-ovatis, 18-22 mm. longis et latis, punctatis foliolis lateralibus inaequilateralibus, petiolo pubescente, 14-25 mm. longo suffulta. *Racemi* densi multiflori, pedunculi folio longiores. *Flores* 10-11 mm. longi. *Calyx* in toto 9-10 mm. longus, pubescens, dentibus infimis, 7 mm. longis. *Vexillum* extus pubescens, in toto 10 mm. longum. *Carina* apice obtusa. *Ovarium* pilis vestitum. *Legumen* ignotum.

KENTANI.—Valleys, *Miss Alice Pegler* No. 156.

A plant allied in some respects to *R. adenodes*, from which it differs in its much thicker virgate stem. The standard is hairy externally. The calyx tube is 3 mm. long, the upper teeth 6 mm. long, the lower 7 mm.

Series 41.—*Leaves* trifoliolate, leaflets narrow. *Flowers* solitary on peduncles longer than the leaves.

57. *R. pauciflora*, Bolus in "Trans. S. Afr. Phil. Soc.," XVI, 383 (1906).

Suffrutex with virgate stems. *Stipules* small. *Leaves* trifoliolate, subsessile or shortly petiolate; leaflets rigid, narrow, either linear-oblong or linear, margins distinctly revolute; terminal leaflets 4-6 cm. long, 3-5 mm. broad, midrib below conspicuous. *Peduncles* longer than the leaves, bent just below the flower. *Calyx* lobes lanceolate, distinctly longer than the corolla, total length of calyx 15-16 mm. *Petals* 10-12 mm. long; keel boat-shaped; standard glabrous. *Ovary* hairy. *Pod* 3.5-4 cm. long, apiculate.

SWAZILAND.—*Burt-Davy* No. 2825. TRANSVAAL.—Spitskop, *R. Pott* No. 5062.

A virgate shrub with trifoliolate leaves and narrow rigid leaflets; the peduncles are one-flowered and longer than the leaves, and the calyx is longer than the corolla.

Series 42.—*Leaves* trifoliolate. *Peduncles* longer than leaves, few-flowered. *Stem* rigid or flexuous.

58. *R. viscidula*, Steud., "Nom.," ed. 2, II, 254; Harvey, l.c. 252.

Copisma viscidulum, E. Mey., "Comm.," 134.

Stem fruticulose, rigid or subvoluble. *Stipules* lanceolate or ovate or subrotund, below glandulose-punctate, 8-11 mm. long, 10-18 mm. broad; common petioles 10-22 mm. long;

lateral leaflets unequalsided. *Racemes* longly peduncled, few-flowered. *Flowers* 10–12 mm. long; pedicels 3 mm. long. *Calyx* lobes longer than tubes. *Carina* boat-shaped, blunt, about 11 mm. long. *Pods* sessile, oblong, viscoso-pubescent.

NAMAQUALAND.—Khamiesberg, W. Pearson; Ceres Division, Koude Bockeveld, *R. Schlechter* No. 8875.

E. MEYER divides this species into :—

(a) *nemorale* magis volubile, foliolis majoribus tenuioribus subcordatis piloso-pubescentibus.

LITTLE NAMAQUALAND.—Kasparskloof, *Drège*.

(b) *campestre* volubile, foliolis minutis firmioribus subortundis sutoomentose-pubescentibus.

LITTLE NAMAQUALAND.—Between Koussie and Garip, *Drège*.

59. *R. Schlechteri*, sp. nov.

Species ad *R. viscidulam*, Steud., valde accedens. *Caulis* flexuosus. *Stipulae* lanceolatae acuminatae. *Folia* trifoliolata, petiolata, foliola terminalia ovata acuta, 12–15 mm. longa, 10–12 mm. lata, longiora quam lata, foliolis lateralibus ovato-lanceolatis, 10–16 mm. longis, 9–12 mm. latis, petiolulia terminalibus 5 mm. longis, petiolo communi 8–20 mm. longo suffulta. *Pedunculi* 2.6–6.5 cm. longi, pauciflori. *Flores* lutei, 10–12 mm. longi. *Calycis* tubus campanulatus, segmentis lineari-lanceolatis quam petala brevioribus. *Vexillum* glabrum. *Carina* obtusa, 11 mm. longa.

NAMAQUALAND,—Between Spektakel and Komaggas, *Bolus* No. 6559; Brachdamm, *Schlechter* No. 1115. A glandular plant.

Differs entirely from the preceding in the shape of the leaflets; the lateral leaflets are unequalsided, ovate, acute, 10–16 mm. long, 9–12 mm. broad.

IMPERFECTLY KNOWN SPECIES.

R. trichodes, Harvey, l.c. 258 (*Copisma trichodes*, E. Mey., “Comm.,” 134).

Stem procumbent, flexuous, very hairy, with patent yellow hairs. *Leaflets* elliptic-oblong, subacute, netted veined, yellow hairy on both sides, gland-dotted beneath, equalling the petiole. *Peduncles* one-flowered, equalling the leaf. *Legumes* unripe, straightish, villous.

CAPE.—*Drège*, no locality assigned.

The “Index Kewensis” refers this species to *R. Totta*, D.C.

R. nitida, Harvey, l.c. (*Copisma nitidum*, E. Mey., “Comm.,” 136).

Stem terete, filiform, volubile, glabrescent. *Leaves* broadly triangular, lateral scarcely unequalsided, glabrous, and shining on both sides, ciliate. *Racemes* equalling the leaves, few-flowered. *Flowers* suberect, pedicels equalling the pubescent, nearly glandless calyx. *Pod* falcate, glabrescent, about three-seeded.

CAPE.—Grassy hills near Omsamculo, *Drège*.

If the description is correct, this cannot be a species of *Rhynchosia*, as the ovary in this genus only has two ovules.

EXCLUDED SPECIES.

R. Rehmanni, Schinz = *Fageia bituminosa*, D.C.
R. ficifolia, Benth. = *Pueraria ficifolia*, C.B., Clarke.